

INSIDE DOPE

Learn to live and laugh—
Thus delay your epitaph

By **GEORGE F. TAUBENECK**

Stories of the Week
Prophet Jones Has
Good News for
Air Conditioning Business
Random Observation
Fathers Are a Sorry Lot
Still a Fighter
Masculinity of the Week

Stories of the Week

On his deathbed, John, who hadn't left a Will, wheezed to his wife:

"Let son Bob run the store."
"Oh, no, I've promised it to Sarah's husband."

"Then give the farm to John, Jr."

"Are you crazy? He's a musician. I'll let daughter Martha take care of the farm. She loves horses."

"All right. You win so far. But I insist that my youngest son, who's a natural-born mechanic, receive my collection of antique autos."

"John, don't be so selfish. I've earmarked that legacy for Gertie as a wedding present."

"Ma!" protested the legator, "Who's dying? You or I?"

According to friends in the Georgia Power Co., of Atlanta, a salesman in that organization made a call on an outlying barbecue stand.

At that moment the proprietor was having trouble with his septic tank. Ever helpful, as a good salesman should be at all times, he volunteered to fix it.

P.S. He fell in.

Prophet Jones Has Good News for Air Conditioning Business

Fantastic "character" in Detroit is a colored preacher who goes by the name of Prophet Jones. His followers (both white and colored) believe in his mystic powers so worshipfully that they have given him a mansion, erise Cadillac, ermine robe, ropes of diamonds, and a most opulent living.

We quote the latest Prophet Jones prophecy:

"God has revealed to me there will be an early spring and summer. Heat records will be broken, and summer will linger longer."

It was with difficulty that Editorial Director Phil Redeker dissuaded some of us from headlining this "news" in studhorse type.

If Jones is right about this, he may win plenty of new converts from amongst air conditioning salesmen!

Random Observation

We always thought the word "new" was adequate to describe anything which was . . . well . . . new. But we see that plain old "new" won't do anymore. Now it's "all new," "completely new," etc.

Plain old "automatic" seems to have lost its meaning, too. Now a product is not just automatic but "completely automatic," "fully automatic," etc. Just how automatic is "automatic," anyhow?

Fathers Are a Sorry Lot

Grandma, who agreed to take care of Frank and his junior high school son while Mrs. Frank is in California, phoned her son-in-law at his office:

"Key to your house is NOT under the doormat, like you said it would be. I'm calling from the corner drugstore. What do I do now?"

(Concluded on Page 9, Col. 1)

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York '55 Room Air Conditioner Line Includes 24 Models

YORK, Pa. — York Corp. will offer 24 models of room air conditioners in eight different styles during 1955, including a new 1½-hp. window unit, the company announced recently.

The 1½-hp. model features thermostatic control, comfort director grilles, and easy filter removal. It is suited for installing in transoms, through the wall, or in the window, the company said. Like all other units in the line, it is protected by York's 5-year protection plan on the entire cooling circuit.

Price leader in the 1955 York line is a ½-hp. room conditioner retailing for \$199.95 at the factory. This model cools, dehumidifies, circulates, ventilates, and filters the air.

Four-way grilles circulate conditioned air to all parts of the room. Disposable-type filters are easily reached without removing the cabinet front. Controls are equally accessible, said the company.

The ½-hp. model is available in two styles. The standard model retails for \$219.95. The deluxe model at \$259.95 features a drawer-type installation which permits minimum-maximum extension into the room. It has the exclusive York comfort director grille and (Concluded on Page 4, Col. 4)

I-H Offers Specials on '54 Units to Dealers

CHICAGO—Discounts of up to 40% are being offered by International Harvester dealers on 1954 refrigerators and food freezers, the company has announced.

The price reductions are based on a special offer to I-H dealers who make quantity purchases, it was explained. The company said the offer will continue in effect until all 1954 models are sold.

The 40% discount pertains to top models such as a 19-cu. ft. freezer normally retailing for \$497.20, it was reported. Smaller discounts are available on lower-priced models which regularly sell for around \$200.

Licensing Laws In the Spotlight

Washington, D.C. Now Has 3 Proposals to Consider

WASHINGTON, D. C. — One more proposal for a licensing ordinance for the refrigeration field in Washington, D. C. was added to the list last week when an Attorney Ringgold Hart, claiming to represent more than 50 big refrigeration and plumbing contractors, offered a draft for the consideration of the District of Columbia commissioners.

Under his proposal, there would be no licensing of those repairing and maintaining equipment. But installation of refrigeration equipment would be limited to those holding electrician and plumbers' licenses.

There are two other proposals (Concluded on Page 4, Col. 5)

N.Y. To Crack Down On Freezer-Food Plan, Servicing 'Gyps'

ALBANY, N. Y.—This state is preparing to get tough with the "gyp fringes" selling or repairing home appliances.

Gov. Harriman has called a conference to discuss methods of cracking down on "rackets in the appliance business," including those in the freezer-food field.

To cover "bait" advertising in general, the conference will be held here March 15. Representatives of the home appliance industry, Better Business bureaus, local law enforcement officials, and consumers have been asked to attend.

The meeting will be the first major program by Dr. Persia Campbell, who was named to the new cabinet post of Consumer Counsel to the Governor. Speakers will include Gov. Harriman, Attorney General Jacob K. Javits, and Hugh Jackson, president of the Better Business Bureau of New York.

At the morning session of the conference, misrepresentation and fraud in servicing home appliances will be taken up, with emphasis on TV service. Bait advertising in promoting and selling new home appliances and other items will be considered during the afternoon session.

(Concluded on Page 4, Col. 2)

House May Investigate Problems Facing Dealers

WASHINGTON, D. C.—A subcommittee of the House Small Business Committee plans to investigate during the coming two years several conditions that affect the appliance and refrigeration industries, it was announced here recently.

Representative James Roosevelt, who leads the subcommittee, said his group would look into the factors that are keeping dairy prices high, whether manufacturers of electrical equipment and appliances are using distribution policies that are fair to the small businessman, and possibly into the entire question of fair trade and price cutting by discount houses.

Florida Considers Law on Handling Frozen Foods

TALLAHASSEE, Fla. — Florida's State Department of Agriculture revealed recently it is collecting information on the handling of frozen foods preparatory to promulgating regulations for trucking companies and retailers.

"We hope that we will be able to get enough information on the subject to prepare some regulations in the not too distant future," said State Chemist J. J. Taylor, who added he knew of no state which had yet put such rules into effect for consumer protection.

Taylor said Florida's regulations governing frozen food before it reaches the consumer probably will include rules on refrigeration in transit, and temperature of store freezers and the level to which they may be filled.

Although pointing out that you can't regulate the housewife in being careful to keep frozen food from thawing out before it is used, Taylor said the regulations also may include a requirement that package directions for dealing with it once it is sold be made more detailed and emphatic.

Expressing belief that house- (Concluded on Page 25, Col. 5)

Atlanta Conference Program Is Set

WASHINGTON, D. C.—Complete program and roster of 68 exhibitors for the air conditioning and refrigeration industry educational conference scheduled for the Atlanta Biltmore hotel in Atlanta on March 17 to 19 was released recently by the Air-Conditioning and Refrigeration Institute.

Special feature of the Atlanta affair will be an innovation in the form of a "sales conference" aimed at pointing out some of the markets that are currently ready for further exploitation by the industry.

The conference and exhibition is one of a series of regional affairs conducted jointly by ARI, the Air-Conditioning and Refrigeration Wholesalers, and the Refrigeration Service Engineers Society.

The educational exhibits will be (Concluded on Page 2, Col. 1)

Swift Faces USDA Charge on Fixture Sales

Agreement To Handle Only Swift Products Alleged In Complaint

WASHINGTON, D. C. — For allegedly furnishing refrigerated fixtures to its accounts at less than cost on the understanding that they would handle only Swift frozen dairy products, the U. S. Department of Agriculture has filed a complaint against the packing firm Swift & Co.

The USDA charges Swift with violating the 1921 Packers and Stockyards Act and will hold hearings on the complaint beginning May 2 in Chicago. Exact location of the hearing has not yet been set.

The action is similar to those currently being taken by the Federal Trade Commission against eight ice cream companies.

In addition to furnishing the refrigerated cases, Swift is also charged in the complaint with loaning retailers money to buy such cases and to meet general operating expenses, supplying them with soda fountain equipment and other fixtures for use in their business, servicing this equipment, and offering unfair discounts, rebates, allowances, and payments.

Swift was charged with doing all this at less than cost for the purpose of influencing these retailers to handle its products exclusively.

Such acts, the Department of Agriculture says, are "unfair and unjustly discriminatory practices and devices in commerce in violation of section 202 of the Packers and Stockyards Act."

Pertinent sections of the complaint follow:

"There is reason to believe that Swift & Co., an Illinois corporation, hereinafter referred to as the respondent, has violated and is violating the Packers and Stockyards Act, 1921, as amended, hereinafter referred to as the act, and therefore, this complaint and notice of hearing is issued alleging the following:

"I. The respondent is now and was at all times mentioned herein (Concluded on Back Page, Col. 1)

Servel Civilian Goods Production Resuming

EVANSVILLE, Ind. — Servel, Inc., which suspended production of civilian products at the close of last year to adjust inventories and change to 1955 models, has resumed manufacturing these products, it was reported.

A company spokesman said workers laid off at the end of 1954 are being recalled and that by March 14, Servel will have as many employed on civilian output as it had before the shutdown.

D Austin Village Report (4)

Occupants Are Satisfied but Survey Indicates Many Minor Problems 6

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ARI Announces Atlanta Educational Program --

(Concluded from Page 1)

open from 1 to 6 p.m. on each of the three days. No meetings are scheduled during those hours.

SALES CONFERENCE PLANNED

Morning of the first day, Thursday, will be devoted to an ARI sales conference. During the evening, RSES will sponsor a demonstration of a simplified installation of automobile air conditioning by Tom Feehan and George Rosser of Pivot Corp., a manufacturer of automobile air conditioners. This will be followed by a "Get-Together" party in the Old South cocktail lounge.

On Friday, the morning will be divided between a second ARI sales conference and an RSES engineering conference. RSES will sponsor a banquet and entertainment in the evening.

On Saturday, RSES will hold its third engineering conference and in the evening will conduct an "Information Please" session moderated by Paul Reed. Also in the morning, ARW will conduct a meeting for its two southeastern districts—Region 4 and Region 12.

EXPANDING AIR CONDITIONING MARKETS

Theme of the opening sales conference will be "Expanding Markets for Air Conditioning." George S. Jones, Jr., managing director of ARI, will moderate.

Scheduled speakers are Jack Aldridge, building specialist for *Life* magazine, "Your Stake In the Home Building Industry"; C. M. Wallace, vice president in charge of sales for the Georgia Power Co., "The Expanding Market as a Utility Sees It"; Willie Mae Rogers, director of the Good Housekeeping Institute, "More Miracles, Please"; and C. E. Stackpole, general sales manager of the Heating & Cooling Div., Union Asbestos & Rubber Co., "Are You Asking Them to Buy?"

EXPANDING COMMERCIAL MARKETS

Theme of the second sales conference will be "Expanding Markets for Commercial Refrigeration." Dr. G. Hodges Bryant, managing director and chairman of the board for the Frozen Food Institute, Inc. will talk on "The Expanding Market in the Frozen Food Industry"; D. H. Burrell, III, vice president of the Cherry-Burrell Corp., will discuss "Modernization in the Dairy Field"; and Starr Hull, executive secretary of the ARW, will describe "The Wholesaler's Place in the Refrigeration Industry."

At the Friday morning RSES conference, James Black, manager of field service for Philco Corp., will explain the silver solder method and show how to "Change Motor Compressors on Hermetic Refrigerators in the Field."

SATURDAY MORNING SPEAKERS

Saturday morning's RSES conference will present John D. Bopp, chief chemist for the Refrigeration Div., Ansul Chemical Co., on "How Dry Is Dry Enough?"; Otto J. Ress, chief engineer for Mueller Climatrol Div., Worthington Corp., on "Servicing Oil Burners"; and K. D. Cunningham, application engineer for Acme Industries, Inc., on "Cooling or Heating Water with the Heat Pump."

68 Will Exhibit at ARI Conference

A-P Controls Corp.; Acme Industries, Inc.; ARI; ARW; Alco Valve Co.; American Gas Machine Co.; Ansul Chemical Co.; Baltimore Aircoil Co., Inc.; Bell & Gossett Co.; Berna Corp.; Brunner Mfg. Co.; Bush Mfg. Co.

Carver Pump Co.; Chemical Solvent Co.; Copeland Refrigeration Corp.; Davison Chemical Co.; Dayton Rubber Co.; De'co Products Div.; General Motors Corp.; Detroit Controls Corp.; Dole Refrigerating Co.

E. I. du Pont de Nemours & Co., Inc.; Electric Auto-Lite Co.; Eston Chemicals Div.; American Potash & Chemical Corp.; Flexible Tubing Corp.; Friedrich Refrigerators, Inc.; General Electric Co.; General Chemical Div.; Allie's Chemical & Dye Corp.; General Control's Co.

Halstead & Mitchell; Heat-X, Inc.; Henry Valve Co.; Holsclaw Bros., Inc.; Imperial Brass Mfg. Co.; International Register Co.

Jackes-Evans Mfg. Co.; Jarrow Products, Inc.; Kelvinator Div., American Motors Corp.; Kerotest Mfg. Co.; Kold-Hold Div., Tranter Mfg., Inc.; Kramer Trenton Co.

Larkin Coils, Inc.; Lehigh Mfg. Co.; Maintain Store Engineering Service, Inc.; Marby Corp.; Jas. P. Marsh Corp.; McIntire Co.; MeQuay, Inc.; Mueller Brass Co.; Penn Controls, Inc.

Ranco, Inc.; RSES; Remington Corp.; Remco, Inc.; Sealed Unit Parts Co., Inc.; Servel, Inc.; Sporan Valve Co.; Standard Refrigeration Co.; Superior Valve & Fittings Co.

Tecumseh Products Co.; Temp-rite Products Corp.; Typhoon Air Conditioning Co., Inc.; United Friguarator Engineers; U. S. Air Conditioning Corp.; United Wire & Supply Corp.

Virginia Smelting Co.; Wabash Corp.; Wagner Electric Corp.; and Westinghouse Electric Corp.

Ricketts Named Assistant Sales Manager for Sutton Consumer Division

WICHITA, Kan.—The appointment of Fred Ricketts as assistant sales manager has been announced by Fred Kath, sales manager, Consumer Products Div. of The O. A. Sutton Corp. which is located here.

Ricketts has been advertising and sales promotion manager for the organization.

Ricketts joined the Sutton organization in 1953 as sales promotion supervisor. In 1954 he was promoted to manager of the advertising and sales promotion department, according to the announcement of the manufacturing company.



Fred Ricketts

Heart Specialist's Report Calls Air Conditioning Boon to Elderly Persons

NEW YORK CITY—Dr. Joseph A. A. Wagner, Pennsylvania hospital and Benjamin Franklin Clinic heart specialist, says air conditioning is of great benefit to elderly persons.

Conditioned air conserves the limited physical resources of old people, according to Dr. Wagner, who is nationally known for his writings on heart conditions of the aged. He added: "Their energies can then be conserved for the necessary processes of living itself."

Philco Corp., meanwhile, reported that a check of government statistics showed that the number of people 65 and over increased from 8,953,510 in 1940 to an estimated 13,250,000 this year, with an estimated rise to 15,740,000 due in 1960.



SETTING THE PACE IN MOTORS FOR THE AC&R INDUSTRY

1 TYPICAL AC&R CASE HISTORY begins with local G-E sales engineer discussing specifications with customer engineer. At this stage, the G-E engineer often contributes valuable motor application advice which will minimize future problems.

2 FACTORY SUPPORT for local sales engineer, where required, is given by G-E application specialists. Their recommendations and suggestions are backed by long experience gained in dealing with hundreds of varied motor-application problems.

For prompt, expert application help



G-E engineering team discusses advanced features of G-E shaded-pole motors

FULL LINE of G-E shaded-pole motors—from 1.5 watts to 1/4 hp is discussed by G-E sales engineer Jim Germanson, G-E motor design engineer Bob Ritchey, and G-E application engineer Bill Abel who point out these superior product features:

- Sealed-in lubrication** makes provision for re-oiling unnecessary, helps increase motor life.
- All-angle operation** makes it possible for you to mount motor in any position.
- Mounting versatility** solves problems, too. Use resilient cradle base or end-ring mounting.

GENERAL ELECTRIC



Plasti-Kote INC.

America's foremost manufacturer of self-spraying enamels, lacquers, and other aerosol consumer products.

WRITE FOR CATALOG

Gift Shop Installs 3 'Weathertron' Units; Engineer Cites Five Advantages

RICHMOND, Va.—One of the first multiple installations of the General Electric "Weathertron" (heat pump) in Virginia has been made recently in Brown's Gift Shop in Charlottesville, according to A. M. Raney, Jr., Weathertron specialist of General Electric Supply Co. here.

Three Weathertrons were used—two WT98 7½-ton units and one YR50 5-ton unit.

The engineering design and sale of the Weathertron system was accomplished by Ray C. Fisher's, G-E dealer in Charlottesville. Ken Payne of this organization pointed out that the multiple installation of Weathertrons was chosen for several reasons. These were given as follows:

"1. Because there are no products of combustion in this year-round system, the owner was able

to save the expense of rebuilding a chimney, certainly a factor in considering first or original cost.

"2. By virtue of having a completely automatic system year-round, the owner was able to save on maintenance cost.

"3. Not having products of combustion, the Gift Shop will, of course, save money on future redecorating cost as this system will provide completely filtered clean air.

"4. By using a multiple installation, Ken Payne was able to provide zone control with separate thermostatic controls for each of the three Weathertrons employed.

"5. A survey of comparative operating cost with fuel type heating equipment and conventional air conditioning proved this system to be competitive in yearly cost."

1½ Hp. Room Unit Added By Friedrich; Plan Packaged Conditioners

SAN ANTONIO—Friedrich Refrigerators, Inc., announced recently that its 1955 room air conditioner line includes a new 1½-hp. unit and that it plans to introduce a line of packaged air conditioners in March.

The packaged units will be produced in 3, 5, and 7½-ton sizes, according to Brent Oberer, national sales manager of the company's air conditioning division.

In addition to the 1½-hp. unit, the room air conditioner line includes ¾ and 1-ton sizes. The line features flush mounting and a new thermal insulator. The latter is described as a high-density acoustical material to cut down on noise.

Oberer said there has been practically no change made in the price structure.

Dr. Mills Plans Open House March 10 For Inspection of His 'Reflective Radiant Conditioning' System

CINCINNATI—Dr. Clarence A. Mills has announced that an open house—by invitation—for an inspection and conference on his "new and radically different" "Reflective Radiant Conditioning" system will be held here March 10.

Persons desiring to attend the event are requested to write to Dr. Mills at once for individual invitations. His address is 2311 Fairview Ave., Cincinnati 19, Ohio.

"Space limitations at inspection sites make it necessary to keep the affair on an invitation basis," Dr. Mills explained, "but it is desired that all really interested persons be permitted to attend."

It was pointed out that the Reflective Radiant Conditioning system is the final, completed system which Dr. Mills began work on in the laboratory in the mid-1930's

and which he began to field-test in his "Reflection Point" research residence in September, 1950.

The system is now ready for commercial and residential use, Dr. Mills said.

The open house day will begin with a 9:30 assembly at the Research Residence. This will be followed by an inspection of other system installations in the Cincinnati area, a luncheon, and an afternoon round-table conference on all phases of the system, according to Dr. Mills.

Novi Names Troy Ruttman As Houston Manager

HOUSTON, Texas — Appointment of Troy Ruttman, nationally-known auto racing driver, as Houston manager of the new Novi Sales & Service Co. here was announced recently.

The company specializes in retail and wholesale distribution of Novi auto air conditioners, heaters, and defroster units.

Ruttman, who has been driving racing cars since he was 15, first drove in the 500-Mile Indianapolis Classic, won in 1952, and placed fourth last year.

He will drive again this year in the special Novi racer equipped with a supercharged 670-hp. engine.

Iron Fireman Elects Wayne Strong as Pres., Chief Executive Officer

CLEVELAND — Wayne F. Strong was recently elected by the board of directors of Iron Fireman Mfg. Co., as president and chief executive officer, the company announced recently.

In another step toward realigning duties and responsibilities of top executives, the directors elected William J. O'Neil as vice president and manager of retail branches and Petro product sales.

Promotion to this top executive position climaxes 26 years of service with the company for Strong, who was first employed as a shipping clerk at the original Iron Fireman plant located in Portland, Ore.

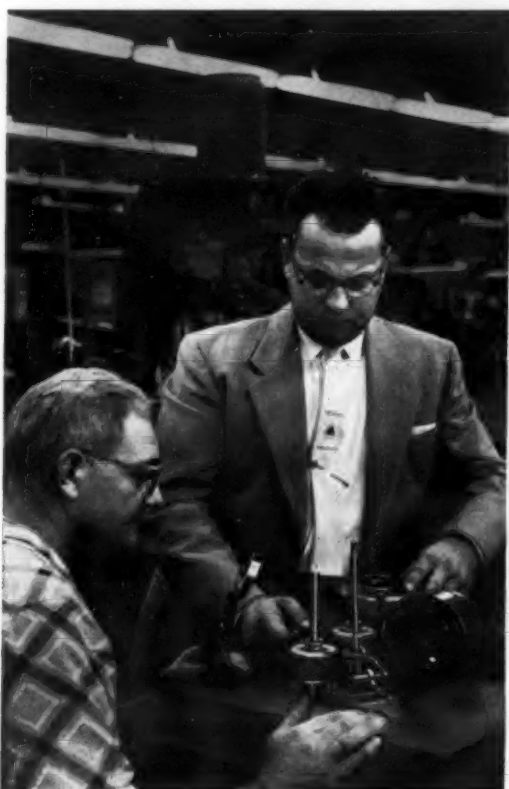
In October, 1953, he was transferred to Cleveland and elected vice president in charge of manufacturing for Iron Fireman plants located in Cleveland, Portland, and Toronto, Can. Prior to that he was manager of the Iron Fireman Electronics Div. in Portland for eight years, where he led the company's program of product diversification into the electronic and aircraft instrument fields.

O'Neil, who as chairman of the board directed the company during the past four years, has just concluded a most satisfactory year with sales of \$26,083,733, the highest of any peacetime year in the company's history. Formerly he managed the company's Chicago operations for 15 years.

Alton Installs Equipment In 6,500 Sq. Ft. Addition

DALLAS — Alton Mfg. Co., maker of air conditioning units, is installing equipment in a new 6,500-sq. ft. addition adjacent to its Dallas plant, it was announced by B. P. Edelman and A. Ward Thornton, owners.

The building adjoins the original plant at 111 Camp St., and will house new fabrication and paint spraying equipment. The firm distributes refrigerated air conditioning units throughout the United States and Mexico.



3 DESIGN MODIFICATIONS of standard G-E shaded-pole motors, if necessary to meet customer's needs, are guided by G-E motor design engineers.



4 EXTENSIVE TESTING of customer's equipment checks motor performance under actual operating conditions—either in G-E laboratories or customer's plant.



5 USER SATISFACTION is a result of proper motor application and tested designs. G-E application help continues until this is assured.

plus top performance features, call in G.E. on shaded-pole motors

Expert local assistance, factory specialists meet all your needs

You benefit two ways when you select General Electric shaded-pole motors for your air-conditioning and refrigeration equipment:

FIRST, you add to your product quality. With G-E shaded-pole motors you get top performance features such as all-angle operation, sealed-in lubrication, and quiet, long-life operation—plus many other advantages of G-E design leadership.

SECOND, you are assured of complete motor application assistance—at every stage of your product development—by experienced G-E motor engineers, both local and factory located. In working on your problems,

these men will have at their disposal G.E.'s extensive motor development and testing facilities.

RESULT: This combination of top-quality motors and complete application service assures you the best possible motor performance on your products—with resulting customer satisfaction. To take full advantage of this over-all service, call in your local G-E Apparatus Sales Engineer *early in the design stage* of your new models—when he can help you most.

FOR MORE INFORMATION on G-E shaded-pole motors, contact your nearby G-E Apparatus Sales Office, today, or write for Bulletin GEA-6134 to Sect. 704-45, General Electric Company, Schenectady 5, New York.

Progress Is Our Most Important Product

GENERAL  ELECTRIC

CLEAR UP MOISTURE Before You Leave

The moment Thawzone is introduced into the system it starts to combat moisture.

You do not have to wait for the moisture to come around. Thawzone acts in all parts of the system at once.

Thawzone actually destroys moisture. . . . Helps prevent corrosion by neutralizing acids. . . . Helps prevent copper plating. . . . Will prevent as well as overcome moisture trouble. . . . A patented invention (cannot be copied). . . . Drying action not "smothered" by oil. . . . Can't cause pressure drop. Costs only about 8¢ per lb. of refrigerant treated. . . . For all "Freon" or methyl units. . . . Only ¼ oz. per lb. of refrigerant required. Get Thawzone at your wholesaler.



THAWZONE®
THE LIQUID DRIER

AIR CONDITIONING & REFRIGERATION ENGINEER

Experienced in estimating, application and sales engineering. Excellent opportunity for advancement with an expanding organization—Toledo's largest. Salary open. Telephone Main 2264 (collect) for personal interview, or write

THE LUMMA CORPORATION
2512 Albion Street, Toledo 6, Ohio

'Gyp' Crackdown--

(Concluded from Page 1, Col. 3)

The State Bureau of Weights and Measures has reported to Gov. Harriman that it is without power to stop "sharp practices" and "high-pressure salesmanship" of the fast-buck boys in the freezer-food plan business.

Bureau officials say sales of home freezers and food plans have increased greatly and that around 600 such plans are now in operation in New York. It claims the number of shady operators in the business is growing, too.

The most frequent complaint of consumers to the bureau is that they were short-weighted and that the meat sold was misrepresented, according to the agency. The "racketeers" deliver the right amount of meat but supply an unreasonably large amount of unusable bone, fat, and trim, the bureau explained.

The bureau said there also have been complaints that customers got too few choice cuts of meat and too many cheaper ones.

Dr. Campbell said the conference will discuss a comprehensive program for strict enforcement of the law and education of consumers on "how to know whether they're getting their money's worth."

In a recent talk before the New York Bar Association, Javits said he was considering legislation to give the Attorney General power to combat misrepresentation.

G-E '54 Net Earnings Set All-Time Record

NEW YORK CITY — General Electric Co. net earnings for 1954 reached an all-time high of \$212,613,000, a 28% increase over the 1953 total of \$165,728,000, President Ralph J. Cordiner has announced.

The record earnings amounted to \$2.46 per share of common stock, compared with \$1.92 in 1953 and \$1.75 in 1952.

Net sales during 1954, Cordiner disclosed, were the second highest in the company's history, amounting to \$2,959,077,000. This represented a 5% decrease from the 1953 record of \$3,128,127,000.

The General Electric president attributed most of the 5% sales decline to a falling off in defense business. Sales of the Apparatus Group of products for commercial use were substantially the same and the Appliance and Electronics Group showed an increase over 1953, he said.

Cordiner said that in 1955 he expects an increase in both sales and orders received for commercial products over 1954; and that he anticipates a further reduction in the company's defense sales from the high levels of 1953 and 1954.

Cordiner noted that the "ratio of inventories to sales at the end of 1954 was lower than it had been in any year of peacetime operations."



YORK room air conditioners of the "C" series which are available in both ¾ and 1-hp. sizes. One model in each size is available with heat pump heater.



CONSOLE model of York room air conditioner is available in ¾ and 1-hp. models.

Washington Licensing--

(Concluded from Page 1, Col. 2)

before the commissioners. One was submitted by Gabell Gwathmey, Director of the Department of Licenses and Inspections for the district. It is his idea to issue licenses specifically in the refrigeration and air conditioning field, but to the contractor firms only.

The Refrigeration Trades Association sponsors a third proposal, which would license both the individual mechanic as well as the contractor. It is the contention of RTA that "illegal" operations by either licensed or unlicensed individuals would best be controlled by this "administrative" type of licensing code.

It is understood that the Commissioners will reach a decision soon on the type of code that will be put into effect, without holding any additional open hearings on the matter.

Baltimore Electricians--

(Concluded from Page 1, Col. 3)

it had been installed by "Master Electricians."

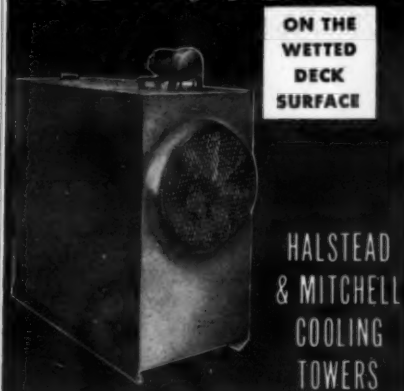
Says paragraph 483A of proposed Senate Bill 160: "The term 'maintenance electrician' as used in this sub-title shall be defined as and including all persons, firms, and corporations engaged in the work of maintaining, servicing, and/or repairing any kind of electrically operated or controlled apparatus device, equipment, appliance, machinery, etc., only after the original installations have been made by a master electrician licensed by this board and approved by the inspection authorities."

The Refrigeration Trade Association is opposing the electricians' measure, and is said to be preparing a proposed "Refrigeration License Law" for introduction in the Maryland state legislature which would give the refrigeration contractors and mechanics in Maryland the right to install and maintain installed equipment within the following areas: from a hand shut off valve in the plumbing supply to an approved trapped drain in the sewer, and from a branch circuit distribution panel or approved electrical supply in the electric circuit.

To Cool New Kresge Unit

ELMIRA, N. Y.—Welliver Construction Co. of Elmira was awarded the contract for the new air conditioned store of S. S. Kresge Co. to be erected at 134 W. Water St. It will be one of the largest Kresge one-floor operations in New York state.

20 Year Guarantee!

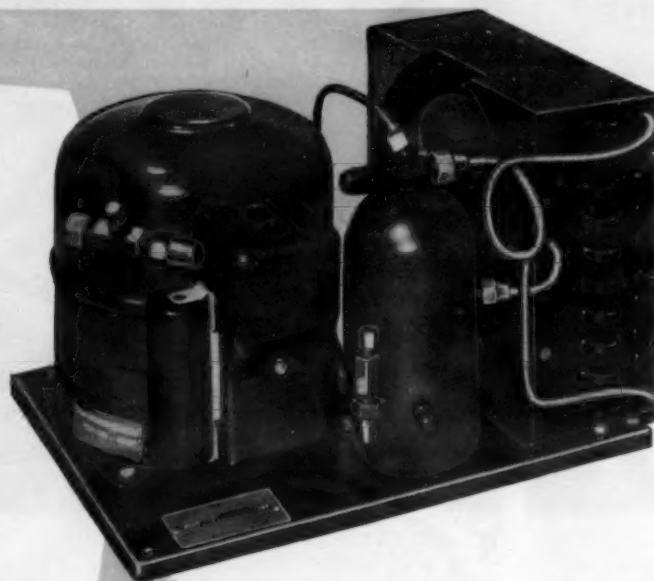


2 to 100 tons

"Built like a Battleship"—economical, lastworthy. Pressure-treated wood in wetted deck surface guarantees against rotting or fungi growth. Stainless steel fan and shaft, plus individual cabinet coatings of Vinsynite, Vinyl Aluminum and chlorinated rubber, add important years of life. Wholesalers in Principal Cities

Halstead & Mitchell
BESSEMER BLDG. PITTSBURGH 22, PA.

Servel SUPERMETIC for Money-Saving Performance



THERE ARE EXTRA SALES AND PROFITS WHEN FIXTURES ARE "POWERED BY SERVEL"

- **EXTRA-COMPACT**, hermetic design saves valuable space — lightweight construction permits "stacking" of units in remote installations.
- **EXTRA-TIME-SAVER**, easily accessible controls have long capacitor leads — only wiring required is to connect supply line to 2 terminal posts.
- **EXTRA-QUICK**, availability of condensing units and all installation supplies from more than 100 conveniently located Servel Authorized Wholesalers.
- **EXTRA-SALES**, promotion aids provided by the factory include direct mail literature, full-line catalogs, installation manuals, decals, and displays.

PLUS THE EXTRA PROTECTION OFFERED BY SERVEL'S LOW-COST FACTORY WARRANTY — AVAILABLE WITH ALL CURRENT SUPERMETIC MODELS!



WRITE FOR LITERATURE about Servel's fully sealed hermetic electric condensing units in both medium and low temperature models to fit any commercial expansion valve system from ¼ through 1 HP; also capillary tube type units in ¼, ½ and ¾ HP sizes for manufacturers of small refrigeration fixtures.

CUT MAINTENANCE COSTS for any user of commercial electric refrigeration, and you've won a steady customer for repeat sales. Because SUPERMETIC is so downright simple in design, so durable in construction . . . so well guarded against wear and friction by Servel's famous built-in lubrication . . . you can count on every unit you install to deliver a full measure of money-saving performance. These same SUPERMETIC features pay off heavily in your favor, too. You handle every installation faster and easier. You have far fewer "call-backs" to bring down your profits. So why not boost your stock with your trade the tried and proved way . . . Switch to SERVEL SUPERMETIC — starting right away!

Servel

Inc., COMMERCIAL REFRIGERATION DIVISION, EVANSVILLE 20, IND.

THE NAME TO WATCH FOR GREAT ADVANCES IN REFRIGERATION AND AIR CONDITIONING

York Line--

(Concluded from Page 1, Col. 2)

pump-out control for clearing stale air quickly.

The ¾-hp. conditioners are available in 12 models—two consoles, and 10 window units. The standard window model retails for \$269.95; the deluxe, with modulation control, is \$349.95, with modulation control and reverse cycle heating, \$379.95.

A ¾-hp. York console-type air conditioner with modulation control will retail at \$519.95 while the same unit, with both modulation control and reverse cycle heating, will retail at \$569.95.

The 1955 line of York room air conditioners features eight models of 1-hp. size—six window units, and two consoles. The standard window conditioner retails for \$349.95, the deluxe, with modulation control, \$389.95; with modulation control and reverse cycle heating, \$419.95.

The console-type unit with modulation control will retail at \$579.95, while another console-type 1-hp. unit including both modulation control and reverse cycle will retail at \$619.95.

The large-capacity 1½-hp. room conditioner, which is a window-type model, will retail for \$499.95.

Macy Food Plan Features Own Name, G-E Freezer

NEW YORK CITY—R. H. Macy Co., large department store here, recently launched a freezer-food plan under its own name using the General Electric freezer.

The company claims that its plan will "cut your budget no matter what you spend now" and is available for \$100 less than many comparable food plans.

Macy is promoting its plan through big coupon advertisements in local newspapers and through radio spots. The company asserts that its advertisements will contain no overstatements or wild claims.

The food portion of the plan is handled by a food distributor whose trucks and personnel serve the customer directly. But Macy puts its guarantee on the whole operation.

A.C., Commercial Refrigeration Sales By Distributors Up 10%

WASHINGTON, D. C.—Air conditioning and commercial refrigeration equipment distributors registered a 10% gain in sales during 1954 over 1953, the U. S. Bureau of the Census reported recently.

This was one of three wholesale trade groups that registered the highest gains of any in the country, the Census Bureau noted. The other top gainers were lumber and construction materials, and grocery retailer-cooperative warehouses, according to the report.

Distributors of electrical appliances, TV and radio sets and parts, and electronic parts and equipment suffered a 6% drop from the previous year. December sales for this group, however, were 5% over the previous December and up 1% over November. Their inventories were down 1% from December, 1953 and down 10% from November.

In the air conditioning and commercial refrigeration field, December sales were also 5% over the previous year, but were down 18% from November.

Inventories were off 17% from December, 1953 and down 3% from November.

Builders Expect 1955 Boom To Top That of '54

NEW YORK CITY—Unexpectedly strong winter activity has home builders looking forward to a boom year with estimated starts ranging from 1,200,000 to 1,400,000 units, the *Wall Street Journal* found in a recent survey.

This compares with about 1,215,000 starts in 1954. Record year was 1950 with 1,400,000 starts.

Some builders indicated to the *Journal* that prices of homes would not be any lower this year, but in some areas may be up as much as 10%, due to increased costs. But, with the higher prices, builders will attempt to give more, because, as a Philadelphia builder said, "Buyers are a lot more value-conscious than they used to be and in today's market they have a choice."

Some builders and financial men feel that the 1955 boom might outrun the money market. Said a Dallas builder: "It appears that home building will be going so fast that money lenders may not be able to keep up with it."

A Metropolitan Life Insurance Co. official predicted that 1955 would be its biggest home lending year yet. He indicated to the *Journal*, however, that while a builder who put up 100 homes last year would have no trouble getting mortgage money to handle 125 this year, he might have to scout around for sufficient money to finance 150.

Fagan Air Conditioning Moves to New Building

LITTLE ROCK, Ark.—Fagan Air Conditioning Co. recently occupied its spacious new building at Ninth and Cedar Sts. here.

Manager of the firm, which soon begins its fifth year in business, is Jack W. Thompson, a licensed engineer who trained at Texas A & M and graduated from Southern Methodist university in 1949.

Biggest single job for the Fagan concern so far, according to Floyd Sharp, executive vice president, was the 300-ton equipment installed in the oldest part of the Arkansas Baptist hospital.

NARGUS Convention Set For Navy Pier In June

CHICAGO—The National Association of Retail Grocers will hold its annual convention and exhibition at the Navy Pier here from June 12 to 16, the association announced recently.

Exhibits will include all kinds of equipment fixtures and building necessities in addition to food and grocery items, including frozen foods. Profitable non-food items for food markets will also be displayed.

The 56th annual convention will provide discussions of methods of cutting costs, streamlining and modernizing store operation, and applying successful merchandising and advertising techniques.

Alton Mfg. Gets More Space

DALLAS—More than 6,500 sq. ft. of new manufacturing space has been acquired by the Alton Mfg. Co. here for the production of air conditioning units, the company announced recently.

The new space is in an adjoining building to the original plant. It belonged to a Dallas newspaper.

On the 'Gold Coast'

Dehumidifiers Keep Vacant Florida Homes Free of Costly Moisture

DELRAY BEACH, Fla.—Small, portable dehumidifiers play an important role in the home maintenance business operated by Ted and Faye Johnson here.

The Johnsons make their living protecting and maintaining elegant homes on the "gold coast" extending from Palm Beach south to Fort Lauderdale during the eight to 10 months of the year that their owners are up north.

To prevent humidity damage in these homes, the Johnsons mount an Oasis air drier on a platform or table and run a rubber hose to a nearby sink, lavatory, or drain. Timers automatically turn on the driers for several hours each day.

A couple of hours of running time daily keeps delicate television sets from deteriorating, they pointed out.

The Johnsons have as many as three air driers in some homes and have placed close to 100 so far, they report.



TED JOHNSON of Delray Beach, Fla., delivers another Oasis air drier to the home of a client along Florida's "gold coast." Johnson provides a year-round home maintenance service for owners of palatial winter homes. Johnson has placed close to 100 Oasis air driers in homes of his clients.



ALCO SOLENOID VALVES

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Users like the positive, automatic shut-off of Alco Solenoids. They are precision controls manufactured for refrigerant flow. Coils are moisture-proof, extra powerful and wound for long life.

Alco Solenoids may be installed in remote locations and operated by any electrical control. For all types of refrigerant service—liquid, suction or hot gas discharge... and for brine, water, steam and air.

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for life

Write for Condensed Catalog 20 and technical bulletins 173 and 182.

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6315

AUSTIN VILLAGE REPORT [4]

Occupants Found To Be Generally Satisfied But Preliminary Survey Indicates Several Minor Problems That Need To Be Ironed Out

The Air Conditioned Village of Austin, Texas consists of 22 homes built in the spring of 1954 as a joint effort of the National Association of Home Builders, National Warm Air Heating and Air Conditioning Association, and Air-Conditioning and Refrigeration Institute. All but one of the homes were sold and occupied.

Numerous manufacturers of air conditioning and other equipment cooperated.

1. Determination of a definition of comfort.

2. Determination of a feasibility of financing residential air conditioning.

3. Determination of a merchandising program to sell residential air conditioning.

4. Determination of initial costs of an effective air conditioning installation.

5. Determination of operating cost of typical installations.

6. Determination of a pattern for calculating size of equipment required.

7. Determination of methods of installation and use of air conditioning equipment.

8. Determination of construction techniques which will make residential air conditioning feasible.

It will be several months before the complete final report is available, but the preliminary results and conclusions of the accompanying article will prove of value to

anyone interested in residential air conditioning.

Ned Cole, project manager, believes that the information contained in the preliminary report "can be used in any area in the country by adjusting the values given to the climate conditions of the area involved. The climate conditions of Austin, Texas, follow:

"Austin is located 30° north latitude (same as New Orleans, La. and Jacksonville, Fla.), and 98° longitude, approximately on hundred miles SSE of the 'Heart of Texas' (geographically), 210 miles south of Dallas, 175 miles west of Houston, and 80 miles north of San Antonio.

"Air Conditioned Village is located in the northwest section of the city approximately seven miles from the center of town in a predominantly residential neighborhood. The immediate area is treeless and relatively flat.

"According to the latest issue of American Society of Heating and Ventilating Engineers Guide, the design temperature of Austin is 100° dry bulb and 78° wet bulb (similar conditions exist in Key West, Fla., Springfield, Ill., Topeka, Kan., Columbia, Mo., and Augusta, Ga.).

"The summer of 1954, however, followed no rules, producing 'unusual weather' resulting in 3° higher design dry bulb," Cole said.

"The installed price of equipment in each of the houses in the village was set by contract in order to equalize the cost to the various builders involved; however, time studies were made of installation time.

"These time studies and information gathered by a committee of the builders of the village are the basis of the following report:

Installation Costs Average \$285

"Installation costs varied from a high of \$453 to a low of \$138 with an average of \$285. The electrical installation was the highest single item with duct installation second," Cole revealed.

"In addition to the initial installation costs, the following costs were reported during the first three days of operation which should be added to the above costs:

"1. Balancing system—required an average of five hours by trial and error methods including balancing air flow and 'tinkering' with the electric control system and repair of faulty duct insulation.

"2. 'Freon' leaks in split systems—each split system developed at least one 'Freon' leak. Search for and repair of the leak, re-insulation of the pipes, and recharging

the system cost an average of \$30. There was some disagreement as to the responsibility for the leak and for the resulting expense."

Causes for 'Excessive' Initial Cost

Cole gave these causes for "excessive" initial cost:

"1. The builder is not familiar with the equipment and fails to allow proper space, facilities, utilities, and timing for the installation.

"2. The 'trades,' particularly plumbing and electric, do not understand the extent of their work on the air conditioning system.

"3. An alarming number of dealers of equipment are unable to install equipment properly and are not able to direct others to do so."

He suggested these solutions:

"1. Completion by the committee of the 'pattern' which can serve the builder as a check list in planning the house and layout of the equipment.

"2. Extension of the training program of the dealers now in progress by many manufacturers to include the plumbing and electrical trades, or inclusion of all labor

and materials required for the complete installation in one subcontract with the dealer. If a single subcontract method is selected, however, the problem of two electricians on the job must be solved.

"3. The builder's service contract with the dealer should include specific requirements for balancing systems, recharging, necessary rewiring to meet city codes, voltage checking and correction, and explaining system to owner, either by literature or personal contact.

"4. Since only by factory packaging can errors in field installation be eliminated, the committee feels the following should be goals of the industry:

"First: Development of a pre-wired 'plug-in' system involving one three-wire 220-volt electrical connection in the field.

"Second: Development of a pre-wired electrical control system using a low voltage plug-in thermostat (thus eliminating an electrical charge of \$17 to \$75 for wiring thermostat) with all controls mounted in the equipment.

"Third: Development of prefabricated ductwork with integral insulation and vapor-seal.

(Continued on next page)

CHICAGO—"The families occupying the village are happy with their air conditioned homes, and the equipment and systems are operating satisfactorily."

That's how Ned Cole, project manager, summed up his preliminary report for builders on the Air Conditioned Village at Austin, Texas when the National Association of Home Builders met here recently.

(A preliminary report by C. W. Nessel on technical aspects of the project appeared in AIR CONDITIONING & REFRIGERATION NEWS in the issues of Feb. 7, 14, and 21.

Cautioning that the preliminary results and recommendations may be changed when the final report is prepared, Cole discussed numerous phases of the project.

3 Elements of Comfort Varied in Studies

"By varying the three elements of comfort (temperature, humidity, and air flow) without the knowledge of the occupant and checking reactions through informal discussions we determined that under the conditions of the village comfort could be defined as follows:

"Of first importance: constant air movement.

"Of second importance: humidity range from 40% to 60%.

"Of third importance: temperature range from 75° to 78°.

"The financing requirements," Cole said, "are twofold: first, initial cost; second, operating costs.

Data Will Help FHA Evaluate Air Conditioning

"Families who have lived with air conditioning purchasing a new home will pay any reasonable amount to secure proven comfort, provided the amount is included in the mortgage; therefore, one of the purposes of the village was to secure sufficient information to enable FHA and VA to properly evaluate air conditioning and include its cost in the appraisal or CRV," he explained.

"The Air Conditioned Village has provided us with this information which will be presented in the near future to both FHA and VA on a national as well as regional basis.

Operating Cost Estimates

"Estimates of the operating cost of the best houses in the village based on actual cooling cycle cost and estimated heating cycle cost indicate that a yearly cost of \$120 will be achieved, based on Austin rates (1.6¢/kwh.).

"Since the \$10 per month cost is no hardship, but a \$35 August cost is a hardship, the committee has begun testing reaction of utility companies to a monthly billing based on one-twelfth the estimated yearly total. Reaction of companies thus far indicates such a rate may be soon forthcoming. Gas costs are already handled in this manner in many areas," Cole said.

Merchandising Aids Listed

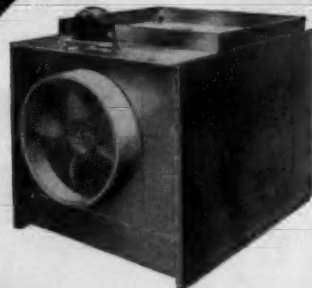
"The final report will include a complete list of merchandising aids collected by observation of the reaction of the occupants in the village. A partial list of those aids follows:

"1. Dusting requirements were reduced from average of five times weekly in non-air conditioned homes to once weekly in air conditioned homes.

"2. Heat rash on infants was a serious problem in Austin this past summer. The eight infants in the village developed no heat rash.

"3. Due to comfortable conditions for preparation and eating, the evening meal indicated an average 40% calorie content increase in the village, over the meals served in the non-air conditioned house.

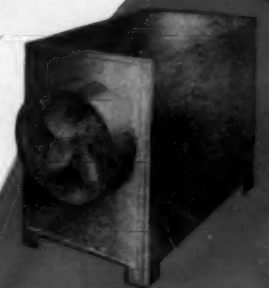
"4. The change in the family living pattern (particularly in regard to entertainment) and to the change in the individual living habits (particularly of children) has been marked; however, complete results will not be available until the final report.



MARLEY AQUATOWERS
(large capacity)



MARLEY AQUATOWERS
(medium capacity)



MARLEY AQUATOWERS
(small capacity)



MARLEY AQUACOOLER



MARLEY REDWOOD
AQUATOWER



MARLEY SPRATOWER
(Natural Draft)

to get a line on
Modern Water Cooling
Dial M
FOR
MARLEY

Call your local
Marley application engineer for
complete information on these towers.

(Continued from preceding page)

"Fourth: Development of industry-wide 'cover-all' warranty relieving builder of responsibility during one year warranty period. In areas using this type warranty, its cost to builder is \$75.

'Ideal' System Installed In 6½ Hours

"The 'ideal' system is not yet available as a factory item. To test the cost of installing such a system, the committee 're-engineered' a system according to the above suggestions and installed it in a typical house, located in an area adjacent to the Village. The installation time was six and one-half hours complete including balancing system for one man and one helper at a cost in labor of \$32.50," Cole declared.

"The goal of \$100 per year for the operating cost of cooling and heating was not reached; however, it remains an attainable goal by using the techniques learned in the village.

"The average cost for summer air conditioning projected to cover the cooling season before the opening of the village is approximately 6,000 kwh. or \$90 to \$100 based on Austin rates.

"By using the data collected for the best oriented and insulated houses, the projected cost for the season is reduced to approximately \$80," he said.

"The initial calculations of heat gain for the houses in the village

were based on the National Warm Air Heating and Air Conditioning Manual 11, 1954 edition.

"Based on this manual, the heat gain in a typical house in the village is calculated to be 29,000 B.t.u. for a temperature differential of 20°.

"Under actual conditions a unit producing approximately 22,000 B.t.u. produced a temperature differential of 30°," Cole revealed.

"As a result of this village, and other tests conducted by NWA, the 1955 edition of Manual 11 will contain values which will produce results approximately 20% less than the 1954 edition.

"The preliminary report covers only the cooling cycle. The final report will include information gained during the heating cycle. However, the committee feels it important to note at this time that the actual size of the heating equipment installed in the village was 50% higher than the calculated size.

"Since over-design of cooling equipment does not produce comfort, we wonder if a similar situation is true in regard to over-design of heating equipment.

"In the determination of heat gain (or heat loss) by calculation, it is important that the builder accurately determine and follow his specifications with particular attention to the following:

"Orientation—As an example of its importance, a 7° shift from south toward west in one of the

houses produces an additional 3,000 B.t.u. heat gain.

"Sun shading—Particularly east and west glass and walls and design to eliminate sun through the side of the sun shading device.

"Insulation—Correct installation is as important as type or quantity," Cole emphasized.

"All manufacturers provide equipment requiring a minimum of floor space as a result of an earlier recommendation that 12 sq. ft. be considered the maximum allowable space which can be allocated in the house proper for equipment.

Connections Require Added Space

"However, it should be noted that electrical, gas, and water connections together with lack, in some units, of 'zero clearance' furnaces required additional space which can be engineered out by careful layout by the builder, or by unit redesign by the manufacturer.

"Utility connections inside the unit eliminated the additional space requirement in many units. Where utility connections are at the side or rear of the equipment it should be noted that a union, a valve, and an elbow or an electric box and connection each require at least 9 in. of space for the average workman.

"All central systems in the village created noise levels which can be considered objectionable to the average owner.

"Sound deadening insulation in-

Residential Air Conditioning

stalled in the unit itself, or in the utility closet, successfully reduces the level to acceptable proportions; however, the cost to the builder must be considered if equipment used requires extensive work by the builder. The cost of sound deadening a closet varies from \$20 to \$45.

Reasons for Noise Problem

"Reasons for the noise problem varied with the equipment," Cole said. "However, the following easily correctable reasons can be avoided by the builder with little cost:

"1. Wood platforms acting as return air chambers proved to be sounding boards for compressor and fan noise. Rubber or felt deadeners between the equipment and the box reduced, but did not entirely eliminate the noise. Installation of the equipment directly to a concrete floor with a side return air duct eliminated this particular noise.

"2. Plywood walls of a utility closet touching the equipment also acted as a sounding board. Clearance between equipment and wall proved to be a necessity with a layer of sound deadening material required to solve the problem. Drywall produced no 'sounding board' effects as produced by plywood.

"3. More vibration noise was produced by units in small completely enclosed closets containing no sound deadening than by units located in part of a utility area.

"4. Return air grilles connected directly to the equipment or connected to the equipment by metal ducts produced excessive fan noise in the areas near the register. A two-bend sound baffle constructed of sound deadening material or a canvas sleeve connection were acceptable solutions.

"5. Liquid and suction lines anchored directly to the equipment and to the frame without proper fittings had to be replaced.

"6. Duct and register noise was frequently objectionable. Insulation inside the plenum (the committee wonders if insulation inside the ducts might not be a good idea also), proper anchoring of ducts and registers, and flexible connections between the equipment and plenum reduced the level to acceptable limits.

"Split systems' reduced the noise problem in the house to acceptable levels, but in turn created a noise problem outdoors objectionable to the neighbors (particularly if the neighbor is not air conditioned and thus opens his windows)," Cole declared.

Noise Problem Deemed Most Serious

"The noise problem proved to be the most serious objection to air conditioning in the village. The committee is happy to report that all companies are working on the problem. Some companies have found methods to control the noise in the equipment itself.

"The committee cautions the builder to solve the noise problem in advance; either by selection of equipment or by locations and design of the equipment area, or by a combination of both.

(To Be Continued)

Sturtevant Div. Names Benedict Manufacturing Engineering Manager

HYDE PARK, Mass.—Frank R. Benedict has been appointed manufacturing engineering manager for Sturtevant Div. of Westinghouse Electric Corp., it was announced recently by G. C. Derry, division manager.

In his newly-created position, Benedict will supervise the operating methods, tooling, and processes of manufacturing as well as coordinate the functions of engineering for the division.

Benedict joined Westinghouse in 1928 at East Pittsburgh, Pa., following his graduation from Tri-State college, Angola, Ind., with an electrical engineering degree. His first 10 years with the company were spent in high voltage laboratory work and special studies on insulating materials.

Following several other engineering assignments, he was named manager of industry engineering at East Pittsburgh headquarters in 1945. In 1948 he became engineering manager for the Westinghouse Atomic Power Div. He returned to headquarters in 1952 as assistant engineering manager for industrial products at Pittsburgh from which position he joined the staff of H. E. Seim, vice president, in 1953.

Lennox Syracuse Plant Starts Big Tooling Program

SYRACUSE, N. Y.—A \$250,000 tooling program for the Syracuse plant of the Lennox Furnace Co., designed for the production of new lines of gas-fired heating and air conditioning equipment, was announced recently by H. G. Krayenhof, general manager of the Syracuse division.

It was also announced that the Syracuse plant will sharply expand its sales program. In line with the expansion, Harold F. Yeazel has been appointed district sales manager for New York and western Pennsylvania. Charles Grice replaces Yeazel as assistant sales manager.

Battles Heads Rheem's Appliance Division

LOS ANGELES—Appointment of Stewart S. Battles as general manager of its appliance division has been announced by Rheem Mfg. Co.

Battles was formerly Norge's vice president in charge of manufacturing and engineering and, before that, vice president of Admiral Corp. in charge of refrigerator and range manufacturing at the Galesburg, Ill. plant.

In his new post, Battles succeeds Carl Horne, who was named to the new position of general sales manager of the division. James Graham was appointed assistant general sales manager.

Rheem's appliance division manufactures the Wedgewood gas range and the Rheem-Wedgewood gas clothes dryer.

MARLEY AQUATOWERS

Marley Aquatowers are the acknowledged standard of the air conditioning and refrigeration industries—the most imitated products in the field. But the 1955 Aquatowers contain numerous features that can't be copied—new design compatibility, new harmony with surroundings, a new standard of performance. Now Aquatower styling features the same eye-appealing appearance found in other consumer appliances. In some models all projecting parts are covered; covers and intake screens are available. Higher performance and simplified service are engineered into all models. For larger installations, Marley Aquatowers feature all-bolts construction to facilitate hoisting, handling and assembly. Aquatowers are built in 11 sizes to serve air conditioning equipment in a wide range of capacities.

MARLEY AQUACOOLES

A companion to the Marley Aquatower and the newest tower to complete the Marley line is the Aquacooler*, an induced draft, counter-flow tower. New Aquacoolers can be installed indoors or out. Venting discharged air is very simple and external static pressure is overcome by the centrifugal fan. They are available in 5 sizes for service ranging from 3 to 15 tons.

Marley engineers have spared no details to make the Aquacooler the best tower equipped with centrifugal blower type fan. Typical of the quality built into this new tower are these features: A balanced spray system equipped with patented Marley cast bronze two-piece nozzles . . . nailless MarPak* type filling, fabricated from select heart quality redwood . . . centrifugal type blower fan, hot-dipped-galvanized after fabrication . . . all interior surfaces coated with corrosion resistant Marmastic undercoating.

*AQUACOOLES is the exclusive trade mark of the Marley Company.

MARLEY REDWOOD AQUATOWER

The new Marley Redwood Aquatower is the first packaged cooling tower to utilize the forced-draft, cross-flow vertical discharge principle. The new tower is designed especially for localities where corrosion is a problem. Because of the forced-draft design, mechanical equipment is removed from the hot, humid air stream. The all-redwood construction is highly resistant to corrosion and its appearance is enhanced by attractive redwood resin stain.

MARLEY SPRATOWERS

For top cooling performance at rock bottom cost, there is nothing like a Marley Spratower. Every structural member of these rugged towers is of heart quality redwood. Spray nozzles are Marley's own patented non-clog design. For smaller units the basin is pre-assembled to facilitate erection.

Series 200 Spratowers are built in expandable standardized units for any capacity service, and are also available with atmospheric sections. They feature the same rugged simplicity and economical operation as Marley's smaller towers.

*Trademark Registered

"Dial M" for Marley—and you've got a direct connection to the world's most complete, most original line of water cooling towers for air conditioning and refrigeration. You have a direct wire, too, to the world's most profitable line of cooling towers—for Marley's the line that eliminates service headaches, call-backs, and kick-backs.

So just dial Marley—and state your problem. Need a tower for indoor installation . . . or outdoor? Must it comply with fire codes? Any special corrosion problem? No matter! In the Marley line there is a tower to meet every service condition and every capacity requirement.

Best of all, Marley towers are available when and where you need them. Stocks are maintained in all important cities. Just dial Marley—and a trained Marley engineering representative will assist you without obligation in solving any cooling tower problem that arises.



The Marley Company

Kansas City, Missouri

Here's Harry Alter's **DEPENDABOOK No. 161** **1954**

REFRIGERATION PARTS and Supplies
plus
Electric-Motor Parts, Air Conditioning and Heating

There are over 9,000 items illustrated, described and rock-bottom-priced in our newest **DEPENDABOOK**. So—get and use this money-saver! Write for your copy to

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"Harry Alter gives you snappy service"

Clark Heads Amana Chicago Sales Area

AMANA, Iowa—Amana Refrigeration, Inc. has announced the appointment of Alonzo N. Clark as district sales manager for the firm's Chicago territory, including northern Illinois, Indiana, Michigan, and Wisconsin.



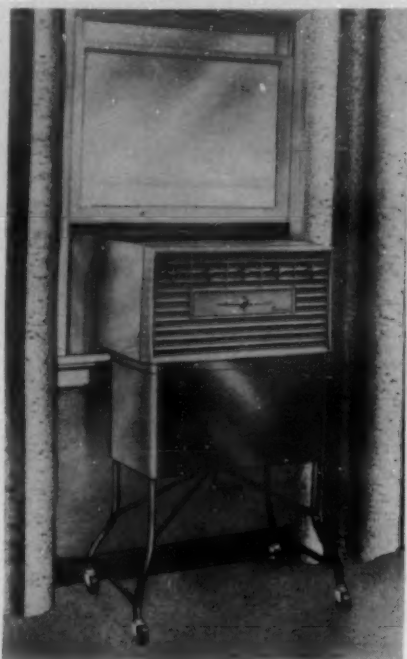
A. N. Clark

He will work with VerLynn Sprague, regional sales manager in the area. Before joining the company, Clark was sales manager for Hurley Distributing Co., South Bend, Ind., and organized freezer-food plans throughout the distributor's territory. Prior to that he was general manager of a food plan operation.

Clark was educated in Europe, and later attended New York university.

To Cool New Branch Store

ST. LOUIS—Biederman Furniture Co. will open its first St. Louis County branch in an air conditioned store to be built in Normandy. In addition to the 20,000 sq. ft. of selling space on the first floor, there will be 8,000 sq. ft. of downstairs selling area.



Portable Room Unit

NEW room air conditioner on wheels by Emerson Radio & Phonograph Corp. has been designed to allow the owner to have his air conditioner in any room in the house. It is mounted on a solid wrought-iron carriage much as a table model television set sits on its table. Installation, according to Emerson, can be accomplished in a minute without tools. The wheels are equipped with rubber tires to prevent marring of floors when the air conditioner is being moved from room to room, according to the manufacturer. The new portables come in a series of models ranging from 1/2-hp. unit priced at \$189.95 to a 3/4-hp. model which retails at \$329.95, according to the company.

Full Page Tells Houston About Biggest Single Room Cooler Order

HOUSTON, Texas—Stahl & Myers, Houston retail air conditioning sales firm, took a full page advertisement in the *Houston Chronicle* recently to announce what it described as "The Largest Single Purchase of Room Air Conditioners in History."

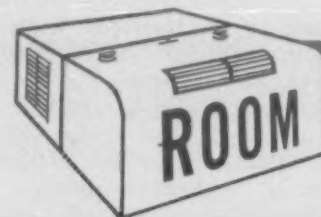
The deal was announced by Stahl & Myers as over \$1 million in room air conditioners, "a whole trainload" of 1955 Vornado models.

The advertising featured the 1-ton and 1 1/2-ton deluxe models, the 1-ton at \$247.95 and the 1 1/2-ton at \$359.95.

Stahl & Myers also used a two-column-wide "teaser" ad on the comics page reading: "Air Conditioning Industry Startled by the largest single dealer purchase ever made! NEWS that may affect YOU. See Page 5 Section A." The reference was, of course, to the full-page ad.

New Mitchell Distributor

CHICAGO—Appointment of Allied Distributing Co., Inc., Omaha, as distributor of Mitchell room air conditioners for Nebraska and western Iowa has been announced by E. A. Tracey, general sales manager of the air conditioning division, Mitchell Mfg. Co.



AIR CONDITIONERS



Room Cooler Section Of ARI Plans Moves To Expand Market

WASHINGTON, D. C.—Two moves designed to expand sales of room air conditioners and provide a "cleaner market" for this product have been made by the Room Air Conditioner Section of the Air Conditioning & Refrigeration Institute.

A public relations agency has been engaged by the ARI section to begin an immediate campaign to sell the advantages of room air conditioners generally to the buying public, and a recommended code of ethics for the advertising of room air conditioners has been drawn up.

Ruder & Finn, New York public relations agency, has been retained on a four-months' trial basis for the over-all public relations efforts. There is a possibility that the campaign may be continued beyond that deadline if it is felt desirable so to do. Individual manufacturers are expected to tie in some of their own promotional activities with the general campaign.

One of the general objectives of the campaign will be to promote room air conditioner's function as providing over-all health-giving qualities, rather than mere temporary relief during a hot spell.

The recommended "Code of Ethics" for advertising of room air conditioners was approved by the section, but will be discussed with the National Better Business Bureau before being publicly announced and put into effect.

N.H. Lieberman Co. Named

CHICAGO—Appointment of the N. H. Lieberman Co., Inc., Minneapolis, as distributor of Mitchell room air conditioners for Minnesota, North Dakota, and northwestern Wisconsin has been announced by E. A. Tracey, general sales manager of the air conditioning division, The Mitchell Mfg. Co.

We're Looking For The Right Man to Fill a Key Sales Position

Large manufacturer of heating and air conditioning offers excellent opportunity for a man with successful sales background in residential heating. Field and factory experience desirable. Must be able to originate effective sales plans for national organization. Salary open. Write, giving complete qualifications, to Box A5176. All replies will be held confidential.



"Trouble-free performance... makes satisfied customers for me," says Ernest W. Farr, Bell Refrigerator Corp., Cleveland.

TO GET ON THE MOST PROFITABLE FACTORY-DEALER TEAM IN THE BUSINESS, TIE UP WITH

TYPHOON
AIR CONDITIONING

505 Carroll St.,
Brooklyn 15, N. Y.

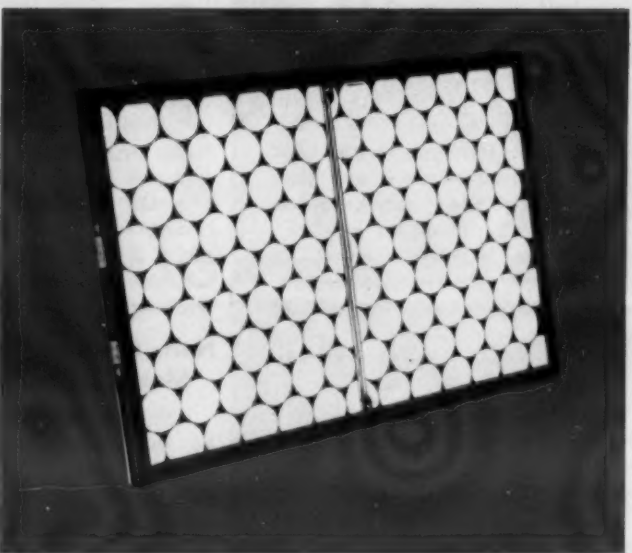
*COMMERCIAL AIR CONDITIONERS, 2 TO 25 TONS
*RESIDENTIAL YEAR-ROUND UNITS FOR GAS OR OIL
*ROOM AIR CONDITIONERS, 1/2, 1, 1 1/2, 2 T.P.
*PACKAGED HEAT PUMPS, RESIDENTIAL & COMMERCIAL



demand
AIR FILTERS
second-to-none

York chose...

AMER-glas



LET AAF QUALITY PUT YOU AHEAD

Why not avail yourself of the more than 30 years' experience and the vast manufacturing resources of American Air Filter Company? Inquire today—there's no obligation!

"We've heard of AMER-glas' reputation," said York engineers. "Show us an air filter that will give superior performance in our York Room Air Conditioners." A made-to-order AMER-glas FILTER was produced which did everything required of it and more.

York engineers found, too, that replacement AMER-glas FILTERS would be available to York users at the consumer level, country-wide.

The two manufacturers collaborated successfully, and all filter problems were carefully worked out. Today, look inside the new models of York Room Air Conditioners—you'll see the custom-designed, white AMER-glas FILTERS.



AMERICAN AIR FILTER COMPANY, INC.
109 Central Avenue, Louisville 8, Kentucky

INSIDE DOPE

Learn to live and laugh—
Thus delay your epitaph

By **GEORGE F. TAUBENECK**

(Concluded from Page 1, Col. 1)

Frank executed: "Stay there while I telephone Sonny Boy at his school. He has a key. I'll ask his Principal to let him out to open the door for you."

Whereupon he did phone the school. A pleasant feminine voice answered, but a midwinter chill drifted into it when Frank made his request.

"But I'm his father," Frank brayed. He outlined the situation, and so much pathos did he put into his narration that The Voice relented:

"Maybe I can help you. Hold the line."

Came a pause, then a shuffling of papers, and The Voice again.

"Will you please give me your son's full name, his address, and the date of his birthday?"

Frank sailed easily through the first two questions. Then he groaned:

"About his birthday—it's Jan. 16 or 28. One is his birthday. And the other is the date I joined my company. I never can remember which is which."

Over the telephone came a highly un-teacherish giggle:

"All right, we'll let him out. I can tell that you're a father."

Still a Fighter

Few people in our industry know that Ross D. Siragusa is the boss man of Admiral Corp. Even less realize that Admiral's president and board chairman is an ex-pug.

The man who guides this \$200,000,000-a-year operation was a part-time fighter for seven years. Then a wallop that "busted his beak" prompted Siragusa to abandon this activity.

A press agent's account of Siragusa's career combooberates:

"In an industry where lightning decisions are commonplace and Marquis of Queensbury rules are luxuries, Siragusa finds his experience as an amateur boxer of great value. He acts and talks in the manner of a boatswain 'telling off' a rebellious fore-castle only when business makes this course imperative."

The whole "Siragusa Story," incidentally, is an interesting one. Here are some "excerpts":

Siragusa was graduated from Chicago's Loyola Academy high school in 1924 at the age of 18. His family didn't have enough money to send him to college, so this ambitious youth started a business with \$50 he had saved.

This firm was given the impressive title of Transformer Corp. of America. It supplied radio battery chargers (in those days, radios were run off "wet" batteries which required frequent recharging).

Five years later the company could boast that it was the largest transformer business in the world. And Siragusa was then only 23 years old.

In that year (1929) a New York bank offered to shell out more than \$5,000,000 for the enterprise. Siragusa said no.

Then came the depression, and the picture changed sharply. By 1934 the corporation was out of business and almost liquidated.

But Siragusa didn't waste time bemoaning this disaster. Together with three associates from the old concern, he organized a new business, Continental Radio & Television Corp.

Siragusa raised most of the new enterprise's capital of \$3,400 by selling his automobile and most of his home furnishings. A corner of

a borrowed garage was the site of the company's initial operations. Desk space in an attorney's office, rented for \$5 a month, was the main office.

This was hardly an auspicious start. But the fledgling firm later became Admiral Corp. whose sales volume in 1950 hit \$230,000,000.

Married and the father of four children, Siragusa devotes considerable interest to his 440-acre dairy farm near Chicago. He's also an ardent fisherman and hunter. His favorite sport is fishing for bonefish off the Bimini flats in the Bahamas.

As if that weren't variety enough, Siragusa also likes to fool around with a camera and play the piano.

Now let's see what he can do with REAL competition!

Masculinity of the Week

The most eloquent lines are not written or spoken—they're worn. —Ohio *Sundial*.

Ft. Worth Assn. Plans Cooperative Program With Air Conditioning Contractors, Architects

FORT WORTH, Texas — B. P. Rhinefort, of the company bearing his name, has been elected president of the Fort Worth Air Conditioning Association for 1955.

Other officers include H. E. Cunningham, assistant secretary-treasurer of Lydick-Barmann Co., first vice president; George L. Frymire, Jr., vice president of Carrier-Bock Co., second vice president; and Max B. Mobley, sales promotion supervisor, Fort Worth Div. of Texas Electric Service Co., secretary-treasurer.

Directors are Curtis L. Love, Love Refrigeration Co.; Howard E. Decker, Decker & Roberts; and I. M. Golan, I. M. Golan Co. Col. Edwin D. McCoy, U. S. Army Retired, is executive secretary.

During 1954, the association made considerable progress under

the outgoing president, W. I. Spiller, Air Accessories, Inc., local Chrysler Airtemp distributor.

Cited specifically was close contact with various air conditioning contractors and the Mechanical Contractor's Association, which led to the adoption of changes bringing up-to-date the Fort Worth city ordinance governing air conditioning, heating, and plumbing.

President Rhinefort said aims of the association for 1955 will be a continuation of the 1954 program of keeping the public informed about the latest developments in the air conditioning field, working closely with contractors with a view of insuring adequate and proper installations, and close coordination with consulting engineers and architects in the design of homes and buildings.

Grimm To Head Evansville Sales Branch for Servel

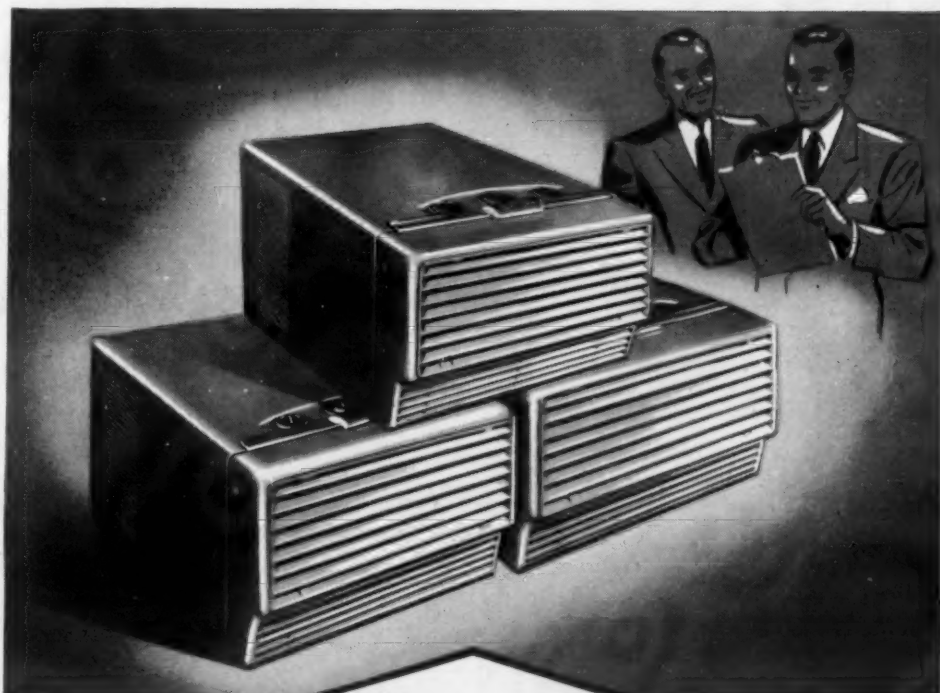
EVANSVILLE, Ind. — S. J. Grimm, a former factory worker and warehouse man, has been promoted to manager of the Evansville sales branch of Servel, Inc., the company's wholesale distributing outlet for southwestern Indiana, southeastern Illinois, and western Kentucky.

Announcement of Grimm's promotion was made recently by Neal E. Schuman, field sales manager.

Grimm started working in the Servel factory in 1946. He was first an assembler of electric compressors in the commercial refrigeration division.

In 1950, he was transferred to the Evansville sales branch as a warehouse man and parts man, and was promoted successively to service representative, service manager, office manager, and assistant to the branch manager.

Now you can have **Controlled Inventory Protection** with REMINGTON'S **BIG 5 FOR '55!**



Division of Remington Corporation, Auburn, N. Y.
Founded 1872

Only Remington gives you true **Inventory Protection** on the Air Conditioners you buy!

For the first time you can really get rid of inventory jitters! Remington has a protection plan that's superior to any ever offered, unique in the industry! You benefit directly... you know how Remington's plan is designed to beat the inventory problem — when and if it arises.

You Can't Lose with Remington!

You can plan your season's turnover with greater accuracy. And, in addition, you receive Remington's unique Weather-Viser Forecasting so you're ready when hot weather hits. For greater profits get the full story from your distributor or send coupon for immediate action.

Big 5 for '55!

- Demonstrator Allowance Plan!
- Controlled Inventory Plan!
- 1 for 9 Plan!
- Weather-Viser Forecast Plan!
- Coloramic Sales-Center!

Get the "sizzle" from your distributor!
Or write **REMINGTON!**



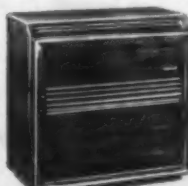
Model 56 1/2 HP
Model 57 3/4 HP



Model 6 1/2 HP
Model D6C Deluxe 1/2 HP



Model 8 3/4 HP
Model D8 Deluxe 3/4 HP
Model 11 1 HP



Model 12 1 1/2 HP



Consoleaire
3/4 HP and 1 HP

Sell the Tropic-Tested line — window units, Consoleaires, consoles — the most saleable line for '55 — proved in over 62 countries since 1937.

Remington Corporation, Air Conditioning Division
11-3 Willey Street, Auburn, N. Y.

Rush the facts on Remington's Big 5 for '55, plus particulars on the new Consoleaire!

Name _____

Company _____

Address _____

City _____ Zone _____ State _____

Copyright 1955 Remington Corporation

Trailers Take Products to Prospects



LIVING ACCOMMODATIONS were omitted from the Trotwood 29½-ft. trailer to be used as a showroom for Admiral, Whirlpool, and American Kitchens products by the American Sales & Distributors, Inc., of Dayton and Columbus, Ohio. In their place, the trailer firm installed elevated mountings for the appliances. At the rear of the trailer is Ted Goldenberg, president of the distributing firm.

Distributor Takes Showroom to Dealers Who Can't Get to His Store

DAYTON — The mountain is going out to Mohammed.

American Sales & Distributors, Inc., of Dayton and Columbus, discovered that many dealers in central and southern Ohio were unable to get to the distributor's showrooms to see new products, so they decided to take the showroom to the dealers.

Ted Goldenberg, president of the firm, went to a Trotwood, Ohio, trailer manufacturer, just outside Dayton, and asked the concern to construct a special trailer for him.

The Trotwood firm, Trotwood Trailers, Inc., used its standard 29½-ft. mobile home shell, but left out all the normal accommodations. In their place, Trotwood installed elevated mountings for Whirlpool washers, dryers, and ironers, and left plenty of space for displaying Admiral television sets and American Kitchens. American Sales represents these three firms in this area.

A large door for loading these appliances was installed in the rear of the trailer and special skylights installed in the roof to compensate for windows which are normally supplied with this trailer.

The windows had been omitted in order to present a plain exterior, upon which signs could be painted.

A 100-ft. hose was installed on a reel beneath the trailer to supply water to the washing machines and kitchens for demonstration purposes. Numerous electrical outlets were placed on interior walls to accommodate any arrangement of appliances.

"Although this is primarily a showroom for dealers, we plan to show our trailer at fairs throughout central and southern Ohio," Goldenberg explained. "Also, if any dealer wants us to leave it with him for promotional purposes, we'll be glad to arrange that."

The trailer is rigged with a special folding TV antenna which can be erected or taken down at a moment's notice. A laundry tub and a drain for the washers have been installed to work in conjunction with the demonstrations.

At the rear of the trailer is a modern, wrought-iron dinette set which can be used for conducting business. The interior walls are finished in natural birch. Exterior trim is white with red lettering and trim.



LENNOX FURNACE CO has put this "Home Comfort Coach" on the road with a display of the firm's air conditioning and heating equipment. An interesting feature of the project is the talking "Lennie Lennox," which provides an interesting way to hear and answer the questions of those who gather around the trailer.

Even Big Air Conditioners Can Be Shown In Lennox Home Comfort Coach

MARSHALLTOWN, Iowa — Helping to promote Lennox air conditioning and heating equipment at the local level, the Lennox "Home Comfort Coach," a traveling display unit, is touring the Midwest territory for Lennox Furnace Co. here.

The Comfort Coach is the size of a large passenger bus. A 17-ft. show window is installed on each side. On display inside is a selection of Lennox comfort equipment. This includes heating and air conditioning equipment and examples

of Perma-flo (perimeter) air handling. A turntable permits a Lennox year-round air conditioner to be shown from all angles.

One of the features of the display is a mechanical Lennie Lennox, the company's well-known cartoon character. Lennie's body, head, eyes, and mouth move and he talks to the audience through a public address system.

An operator with a microphone is stationed in the cab of the coach to operate Lennie. The system is designed to pick up comments and

questions from the audience . . . thus, Lennie Lennox can answer. Informal "Comfort Clinics" are held in this manner.

The Lennox Comfort Coach also has facilities for showing motion pictures and film strips. It is all handled by a two-man crew.

Before the Lennox Comfort Coach enters a town, the local Lennox dealer promotes its arrival through newspaper, direct mail, and radio advertising. The dealer usually sponsors a contest in conjunction with the visit of the Lennox Comfort Coach.

Removable letters on the sides of the coach carry the dealer's name and the name of the town. In this manner, the coach is "personalized" for each dealer.

The coach, painted in tan and brown, was first put into operation last May. First reports indicate that, in towns visited by the comfort coach, the sale of Lennox equipment has been stimulated to a considerable degree.

General Air Conditioning Opens Houston Office

HOUSTON, Texas—John Boethling has been appointed manager of the regional office of the General Air Conditioning Corp., which has been established here. Boethling was transferred from the Los Angeles home office and factory.

Kelvinator Names 3 As Field Executives

DETROIT—Three executive appointments in the Kelvinator field organization were announced recently by D. A. Packard, general sales manager.

L. E. Walters, Dallas zone manager, has been



L. E. Walters



D. G. Keller

named western regional manager, succeeding G. T. Etheridge, recently appointed manager of automotive air conditioning for the Kelvinator Div.

D. G. Keller, manager of the Minneapolis zone, has been appointed Dallas zone manager, and F. M. Breault, assistant zone man-

ager at Minneapolis, has been promoted to manager.

After several years in automotive production and service work in Detroit, Walters joined Kelvinator in 1930 as purchasing agent for the company's Detroit zone office. He spent a year in the factory sales department, and two years as zone sales promotion and advertising manager.

From 1938 to 1942 he served as sales assistant to the Detroit zone manager and then became a regional manager for the War Production Board in Atlanta. He has been Kelvinator's Dallas zone manager for the last 10 years.

Keller, who has spent more than 25 years in the appliance business, joined Kelvinator as manager of its Kansas City, Mo., zone in 1939. He previously had served other manufacturers as a district manager, distributor sales manager, and factory branch manager. He had been zone manager at Minneapolis since 1951.

A Kelvinator employee for more than 27 years, Breault joined the Detroit headquarters staff in 1927. After a number of staff promotions, he went to Lansing, Mich., in an administrative capacity.

Breault was assigned to the Minneapolis zone as comptroller in 1945, and has been assistant zone manager since 1951.



For On-Time Delivery

Volume depend

A complete line of





"The lady who is wise will ask to be advised if it's powered with a Delco Electric Motor."

Dependability of delivery means a lot to a volume producer, and many a customer has learned that he can expect it—and get it—from Delco Products. He knows that whatever the size of his order, Delco will deliver, when he wants it, where he wants it.

And there's another kind of Delco dependability, too—the dependability that Delco

★ Watch for Delco Electric Motor national advertising now appearing in *The Saturday Evening Post*.

Distributor Margins Hit New Low, According to NAED Cost Survey

NEW YORK CITY—Average gross margin (percentages to sales) of electrical distributors have been going nowhere but down, according to the most recent cost survey conducted by the National Association of Electrical Distributors.

Gross margin, which the association says represents the compensation for the distributor's functional services, averaged only from 12.3 to 15.9% last year on the various appliance lines, according to the report.

This compared to a range of 14.9 to 17.1% in 1950 and 17.8 to 20.5% in 1940.

"Net profit for appliance distributors before Federal taxes," NAED declared, "has sunk to 1.95% (Year 1953 figure), while combination house distributors (appliance and apparatus and supply) stands at 1.1% (as of April, 1954).

"This is due largely to a very low gross margin rate of 13.4% (12.3% for combination members with radio, television, and major appliances).

"In other words," NAED stated, "these figures mean that the gross margin, or compensation for functional services performed by electrical wholesale distributors, has

been so reduced that their net profit after taxes hardly equals bank interest rate of return on money invested in business.

"The plight of the electrical distributors, as indicated by the foregoing figures, should cause the electrical industry to pause and consider the 'value' of distribution rather than, as many have in the past, the 'cost' of distribution," NAED warned.

Convention Vetoed

Informal Summer Meeting Scheduled by NARDA

CHICAGO—The board of directors of the National Appliance & Radio-TV Dealers Association has decided that NARDA should not hold a convention during the summer home furnishings market this year, according to Harry Price, president.

However, Price added, it was decided that the organization should hold a meeting of those members who come to Chicago "and exchange ideas and discuss association business on the panel discussion basis."

Up until last year, NARDA had been holding formal mid-year meetings annually.



Jarro "Curvall" Gasket Installation

Jarro 'Curvall' Gasket Needs No Pre-forming, No Notching of Corners

CHICAGO—A new type of rubber gasket for refrigerators and freezers has been developed by Jarro Products, Inc. here.

Called the "Curvall Series 1400," it eliminates the need for pre-formed frame gaskets because, when installed, it gives the same custom appearance as the pre-formed frame gasket, the company said.

Curvall is flexible, shaping itself to any desired bend or curve. It fits on straight sections of the door as well. Notching is not needed on rounded corners.

The Curvall Series 1400 is available in 11 different sizes for universal application. The gaskets require only a fraction of the storage space formerly needed, the company said.

Philadelphia Sales by Distributors

THE ELECTRICAL ASSOCIATION OF PHILADELPHIA

	Air Conditioners		Home Freezers		Ranges		Refrigerators	
	1954	1953	1954	1953	1954	1953	1954	1953
January	1,761	640	544	1,457	1,721	1,192	5,517	4,917
February	4,700	1,060	571	1,275	1,287	1,253	5,254	6,238
March	5,144	2,207	744	1,273	1,511	1,092	5,676	6,020
April	4,957	3,853	961	1,381	1,131	1,094	5,142	5,555
May	5,089	7,288	770	1,312	1,303	1,250	5,378	6,563
June	6,410	5,345	980	761	2,289	1,377	6,917	7,197
July	1,585	3,854	847	1,074	1,188	1,479	5,998	8,743
August	506	556	1,117	852	1,225	1,355	5,848	5,823
September	138	715	792	739	2,718	1,065	5,618	6,298
October	41	421	764	562	1,776	1,849	3,889	4,646
November	21	119	843	544	2,022	1,589	4,347	3,549
December	789	343	789	402	1,397	1,730	3,896	3,727
Total	31,141	26,391	9,712	11,632	19,568	16,355	63,586	69,366

Dec. Air Conditioner, Clothes Dryer Sales Double

PHILADELPHIA—A very strong December and a good overall year in appliance sales were noted in a recent report of distributor sales made by the Electrical Association of Philadelphia.

Air conditioner and clothes dryer sales in December more than doubled those of the same month in 1953, while home freezer sales were nearly double the previous year's figure. Refrigerator sales were slightly higher as December

was only the third month in the year to exceed sales of the same month in 1953.

For the full year, clothes dryer sales were up 41% over 1953, range sales were up 19%, air conditioners up 17%, and dishwashers up 16%. Refrigerator sales were down 9%, and freezers off 17%.

Comparative monthly sales for 1953 and 1954 on air conditioners, home freezers, ranges, and refrigerators were as shown in table.

Norge Jan. Sales Quadruple 1954 Month

CHICAGO—Factory sales of Norge products in January exceeded \$15,100,000, a record for a single month and nearly equal to the entire first quarter volume of 1954.

This was announced recently by Judson S. Sayre, president of Norge, a subsidiary of Borg-Warner Corp.

Increased distributor strength, the new line of refrigerators and ranges, and established consumer demand for Norge home laundry appliances were the main reason

for the gain, Sayre reported.

January sales this year totaled better than four times those of last January, which were \$3,717,312.

A second shift has been added at the Muskegon Heights, Mich. refrigerator and freezer plant in order to meet increased demand, Sayre disclosed.

"Refrigerator sales alone were six times higher than those of the preceding January. Billings on clothes dryers were four times greater.

Nebraska Fair Trade Law Violates State Constitution

LINCOLN, Neb.—Nebraska's fair trade law was recently declared unconstitutional by the state Supreme Court.

The court ruled that although the law did not violate the Federal constitution, it did violate the state constitution. The court held that, among other things, the act deprived persons of liberty and property without due process of law.

The decision upheld the earlier ruling of a lower court in a suit filed by McGraw Electric Co. against Lewis & Smith Drug Co., Omaha. Also covered by the ruling

was a similar suit brought by General Electric against J. L. Brandeis & Sons, Omaha department store.

Referring to the non-signer clause of the Nebraska law, the court said that "an effect of this legislation is to permit one producer and one retailer to do on behalf of a class of retailers that which legally the members of the class are forbidden to do on their own behalf. It compels retailers to the observance of the terms of an agreement to which they have never given assent."

COMING MARCH 21

The Air Conditioning Issue of The NEWS

Every NEWS' reader looks for this one—reads it and saves it. The March 21 issue of AIR CONDITIONING & REFRIGERATION NEWS contains detailed specifications on all 1955 model air conditioning units. Filled with information, it is of lasting value to the men who will sell and service your air conditioning in 1955.

Supplement your company's free specifications listing. Tell your own sales story with a powerful, eye-stopping advertisement. Make your space reservation now. Advertising forms close March 11.

AIR CONDITIONING AND REFRIGERATION *News*

450 W. Fort Street, Detroit 26, Michigan

Offices: 521 Fifth Ave., N. Y. 17; 134 S. LaSalle St., Chicago 3; 15515 Detroit Ave., Cleveland 7.

of Electric Motors

Producers on Delco!

Fractionals and Integrals



Electric Motors bring to your product. Delco Electric Motors are job fitted to your products by our engineers working with your engineers. The motors are thoroughly tested in specific applications. Finally, they are put into production... built to a high standard, with mechanical and electrical qualities

guarded all the way by rigid control. That's why every Delco Electric Motor gives top-notch, completely reliable performance.

Delco parts and service facilities are available the world over.

Delco Products, Division of General Motors, Dayton, Ohio



DELCO *Electric* MOTORS

PRODUCT OF GENERAL MOTORS

Proved best by Performance!

There Is Still Room for Small Market

Personal Touch and Nearby Location Keep It Going
Despite Large Scale Chain Competition

By George M. Hanning

CHATTANOOGA, Tenn. — For the small "ma and pa" food store—one doing less than \$10,000 a month business—self-service refrigeration equipment is not necessarily a good thing, particularly if the store is not air conditioned.

So believes Walter Young, Jr., Warren Co. distributor here, who does 95% of his business among stores of this type.

Young sees a continuing and strong future for closed-type equipment among small store owners. It is pretty hard to get them to pass up the self-service type equipment in favor of the closed type these days, he admits, but it is definitely to their advantage to do so.

Advantages of Closed-Type Display Cases

Why?

An open-type case, explains Young, will not give its maximum performance in this part of the country without air conditioning. In the summer, when the temperature gets over 90° F. for months at a time, the store must have at least one fan for comfort cooling. The circulating air motion will cause drafts that scoop the cold

air out of the case and reduce its efficiency.

Under such circumstances, a closed-type case equipped with sliding glass doors will do a better job for the merchant, the Warren distributor asserted. During rush hours, the sliding doors can be removed without doing undue harm. Then during slack periods, the refrigeration is preserved inside the case. With an open case, the coils would have to be oversized to do an adequate job during hot weather.

Young, who has been a Warren distributor for 25 years and has been in the refrigeration business even longer, also believes, that in this age of increasing centralization of the food business into large supermarkets, there is a good future for the small independent grocer.

\$5,000 In Equipment Will Start Store

A person who knows the food business, he contends, can today invest \$5,000 in equipment and in not too long a time build up a \$5,000 a month volume. This would earn him more money than he

could make doing the same work for a chain supermarket and he would get the great personal satisfaction of being in business for himself.

The \$5,000 investment would be spent, he explained, for a closed meat case and unit, closed vegetable case and unit, a small frozen food case, a meat walk-in, a slicing machine, scale, and a meat block. A cash register would be extra.

With this much equipment, he declared, the grocer could do a profitable job with a minimum of help.

The big advantage that the small neighborhood grocer has over the supermarket is its "personal touch," Young believes. A smart grocer can build up a good business by treating his customers as persons rather than faceless numbers.

There are many people, he insists, who prefer to have the grocer greet them by name and be familiar with their personal tastes rather than shop by the assembly line in a supermarket where no one knows who you are or cares.

"People like to be recognized," he stated. "They are flattered when the grocer greets them by name as they come into his store and

Commercial Refrigeration

knows without being told what brand of product they use."

The small neighborhood market also offers the customer a number of other advantages that the supermarket by its very nature cannot offer, Young pointed out.

The neighborhood market is closer, physically, to its customers. They don't have to get out the car and travel for a mile or so to the supermarket for a few items. And, after getting their few selections, they don't have to wait in line at the checkout counter to pay for their purchases.

Children Can Shop Easier At Neighborhood Store

The neighborhood grocer also offers a place where a mother can safely send her child to buy a few things she might need in a hurry. She generally will not have to worry about him crossing busy streets. And she knows that if the child might become forgetful about what he was sent for, the grocer, being familiar with her buying pattern, can usually determine what is wanted. The same would not apply in the self-service supermarket.

Being close at hand, the neighborhood grocer has the edge with the housewife who likes to serve strictly fresh fruits and vegetables with her meals and prefers to wait until she is ready to use them before purchasing. His line of fresh fruits and vegetables can be the small grocer's strongest lure, Young believes.

Refrigeration Man Must Sell Grocer on Idea

While his experience tells him that these things are true, Young knows equally well that they are not always apparent to the small grocer. It is up to the refrigeration salesman to convince the grocer that they are true and to teach him how to make the most of his opportunities through personal selling.

He has to show the grocer how his equipment will permit the grocer to merchandise fresh produce that he could not even handle without refrigeration, how refrigeration can cut down his loss of profits through waste, and how it can improve customer service.

At the same time, it is the job of the salesman not to overload the small shopkeeper with refrigeration equipment. The neighborhood grocer in normal working class areas does not need a large amount of refrigeration equipment, Young believes.

But as he prospers and his trade expands, he can use more equipment profitably. "The business I like best," Young avers, "is providing additions, betterments, and expansions for my small customers. I like to grow with the customer."

The Warren distributor has three salesmen in addition to himself and two servicemen to cover 27 counties in Tennessee, Georgia, and Alabama. Being a salesman, he considers service a necessary evil, but is careful to provide good service to his customers.

Believing that an ounce of prevention is worth a pound of cure, he attempts to eliminate as much

service difficulty in advance as possible.

To this end, his own men make all his installations so that he is sure the job is installed correctly. Then the salesman who sold the job is asked to check back with the customer a few weeks after installation. Knowing enough about the equipment to be able to spot trouble, the salesman reports back on its condition to the office.

Catch Troubles In First Few Months

"I believe that equipment properly installed will settle down after the first few months. If you catch any trouble that develops in that time, the job will be all right after that," Young said.

Young recalled that not too long ago, one of his salesmen checked an installation in a small outlying town. He reported back that the compressor was much too noisy. Young immediately ordered a replacement. When it arrived, he sent a man to replace the old unit.

When the serviceman informed the proprietor what he was going to do, the customer was surprised. He remarked that he hadn't complained about the unit, though he did think it was too noisy.

"You didn't have to complain," joked the serviceman, "we could hear it all the way to Chattanooga."

He then informed the grocer that the salesman had reported the noisy unit and his company wanted to make it right.

"The next time that grocer needs equipment," Young remarked, "you can bet that he will remember us and at least give us a chance to make the sale."

"We have a number of customers who feel this way. Some even go so far as to call us when competing salesmen have tried to sell them equipment in which they become interested. If they want it, we get a chance at the sale."

Customer Loyalty Hard To Beat

"It's rough to compete against loyalty like that," Young smiled, "but it is something that takes years to build up. A new organization just going into business doesn't get a competitive advantage like that."

Young will take old equipment in on trade to sell new equipment. If it is in good enough condition or can be put in good enough condition to give good service for several years, Young will recondition it and resell it at a good price.

If the equipment will not perform well even after reconditioning, he will junk it immediately.

"If the fixture won't give good service to your customer," Young commented, "you are doing him no favor by selling it to him at any price. And by not creating a satisfied customer, you are doing yourself no favor either."

Young noted that in making a sales presentation to a prospect, the best way to overcome the prospect's arguments, is to keep him from making them in the first place. He does this by attempting to anticipate their objections in advance and to counter them before they can be made.



Your Customers
Love 'Em...

For Specialty Selling
For Impulsive Buying
For Greater Sales Impact!

WIN EXTRA SALES THE EASY WAY With These KOCH Display Cases!



• KOCH Model 2508, 8 ft. long all-purpose display case.

• KOCH Model 2304, 4 ft. long full-vision display case.

• KOCH Model 306, 6 ft. long triple-shelf display case.

Exclusively designed to move long-profit perishables . . . in the corner grocery . . . or the mammoth super.

Greater beauty . . . increased economy . . . eye-capturing display. Converts high-cost floor space into high-profit sales!



**KOCH
PACKAGED
AIR CONDITIONERS**
The correct size for your needs . . . from 3 h.p. up
• Efficient • Strong • Quiet

Write for complete details . . . on the profitable Koch line.

SINCE 1883

KOCH

refrigerators, inc.
NORTH KANSAS CITY 16, MO.



**NEW! LOW COST REVERSE CYCLE
VALVE**

CONVERT RESIDENTIAL-COMMERCIAL
UNITS TO HEAT PUMPS

Valve handles air or water cooled units—Hermetically welded—Light—Simple to install—No brackets—Solenoid operated—(specify voltage) Discharge 1/4", Suction 1/4"—Positive pressure seating—Guaranteed.

\$3975
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SEAL-O-MATIC, INC.

Send check or money order to:
364 SEVILLA AVE.,
CORAL GABLES, FLA.

400 Florida Homes Get Wiring That's Ample for Today's and Tomorrow's Needs

MIAMI, Fla.—There were no popping fuses, fuzzy TV pictures, or lukewarm air conditioning at Carol City when the first 400 of 10,000 homeowners moved into the new development recently.

Because 100 ampere electrical service was installed in homes in the \$7,025 to \$8,650 price range, homeowners can safely operate electrical appliances now on the market.

House for house, there's more electric current available in Carol City, it is claimed, than in any other community of this type in the country. To handle it, there is over 2,800 miles of copper wire, sheathed in steel conduit and plastic non-conductors.

"Carol City, built for all-electric living, marks another important step in the development of an efficient, safer, more comfortable home," said Richard B. Roberts, vice president of the local power company. "The 100-ampere service prevents waste of electric current, minimizes the danger of overheated wires, and eliminates unsightly extension cords and home-made gadgets that can cause short circuits. We are proud to join with the developers of Carol City to provide home wiring that is not only adequate for today's appliances but for tomorrow's inventions as well."

Builder Julius Gaines, president of Gaines Construction Co., said: "This is the first large housing project in the country that is built to the strict specifications of the new electrical code of the National Association of Home Builders. It provides for more electrical service than required by Dade county authorities. Our costs are higher, but we are convinced that it is a long-term investment that will mean extra convenience."

Electrical installations have been subcontracted by Gaines to Monahan's Electric Co. of Miami. Subcontractor John Monahan also emphasized that home wiring has

not kept pace with the progress of electrical appliances and lighting. He explained that a 5% voltage loss from inadequate wiring, for example, produces a 10% loss of heat in any heating appliance or a 17% loss of light from an incandescent lamp.

"Pre-fabricating much of the electrical installation saved time and money," Monahan stated.

"Electricians threaded three wires for 100 ampere service through steel conduits ranging in lengths from 3 to 15 ft. This, plus pre-assembling of the meter box to include the weather head, riser and grounding conduits, are two shortcuts which will make it possible to completely wire 20 houses a day when home building shifts into high gear," he concluded.

To take advantage of the 100 ampere service, Hotpoint appliances are being offered to home buyers at Carol City under special arrangements with the Dynamic Appliance Corp. of Miami.



TEMPERATURE
Six Months Ago
TODAY
102°
Remember Last Summer?
NOW
Is the Time to Install
Next Summer's Cooling
BE READY!
CALL
FAHNESTOCK
Heating — Air Conditioning
440 NORTH WYOMING WICHITA 2, KANSAS

There's a
GENERAL ELECTRIC
Air Conditioner
to Fit Your Present
Forced Air
Heating System
FREE ESTIMATE
Install Now —
Start Paying Next May

Carrier Announces 2 Appointments

SYRACUSE, N. Y.—Fred Williams, staff assistant to John M. Bickel, vice president, Unitary Equipment Div. of Carrier Corp., has been named merchandising specialist for room air conditioners and automatic ice makers in the Philadelphia district, it was announced recently.

Carrier also announced that Roy Lansing, assistant to Bickel, has been named assistant to L. M. Ross, manager of the company's Chicago district office.

Williams has been with Carrier at its Syracuse headquarters for two years. Lansing has been with Carrier for nearly 15 years.

'Clearance Sales'

Price Cuts on '54 Model Room Conditioners Get Startling Results

PRE-SEASON sales of air conditioners were sought by this advertisement by Fahnstock, Inc., Wichita, Kan. dealer. Note that the advertisement reminded the customer that his payments would not start until May, which is well into the warm weather season in the dealer's area.

ST. LOUIS—February "clearance" sales of room air conditioners by a number of dealers (including some department stores) have resulted in a response that some retailers have termed "startlingly good," particularly in view of the fact that the sales were conducted during some of the worst winter weather St. Louis has experienced.

Big price cuts on 1954 models were featured in the advertising of the "clearance sales."

Breaking with the retailer advertising was the power company's advertising which reviewed the growth of air conditioning in the area and stated that:

"Union Electric is spending \$4,500,000 to get ready for air conditioning," this relating to the company's efforts to provide proper voltages on its lines for any loads that air conditioning might impose.



It's great to be a Carrier Room Air Conditioner Dealer!

Because Carrier Distributors are extra helpful!

Knoxville Dealers Sold 45% More Room Units In '54 Than During '53

KNOXVILLE, Tenn.—Knoxville appliance dealers sold 45% more room air conditioners during 1954 than they did during 1953, figures released recently by the Knoxville Utilities Board have revealed.

The 32 reporting dealers sold 254 room coolers in 1954 as compared with 174 in 1953.

They also reported a 148% increase in clothes dryer sales and a 30% rise in automatic washers. Water heater sales moved up 4%, while freezers and conventional washers held even.

Waste disposal sales slipped 5%, ranges 14%, refrigerators 23%, and ironers 51%.

Unit sales and dollar value of each appliance for the year follows:

Appliance	No. of Units	Value
Room Coolers	254	\$ 73,933
Home Freezers	1,210	420,589
Refrigerators	3,470	917,778
Ranges	3,899	911,873
Water Heaters	817	98,106
Dishwashers	68	25,389
Waste Disposal Units	22	2,260
Automatic Washers	2,281	537,914
Conventional Washers	1,887	250,588
Clothes Dryers	412	74,528
Ironers	51	10,337

MARSH Instruments

THE SERVICEMAN LINE of Testing Gauges, Testing Thermometers, Timers, etc.

PRESSURE GAUGES and Dial Thermometers for all services.

MARSH-ELECTRIMATIC, Water Regulating Valves, Solenoid Valves.

MARSH INSTRUMENT COMPANY.

Sales Affiliate of Jas. P. Marsh Corporation

Dept. D., Skokie, Ill.

When a Carrier Dealer wants to demonstrate the dozen ways to install a Carrier Room Air Conditioner, he really doesn't depend on this kind of support. But the distributor holds up his end in other ways. For example, he has a warehousing plan that will keep plenty of units within easy reach. More than that...

Carrier Distributors know air conditioning!

They grew up in the air conditioning business! Twenty-five of them have been associated with Carrier for more than twenty years... nearly sixty of them for ten years or more! They're the most experienced air conditioning distributors in the industry!

You can count on them for knowledgeable help, practical assistance, sound personal counsel. The Carrier Distributor will help you dig up prospects! He'll help you close sales! Another important sales-aid...

You have the Carrier name to sell!

Carrier doesn't make light bulbs, TV sets or phonograph records—just air conditioning! They know air conditioning best! And Carrier Room Air Conditioners show it!... from the slim silhouette styling to the weather-armor cabinet... from the corrosion-proof coils to the exclusive cooling reservoir!

Learn more about the new 1955 Carrier Room Air Conditioner... and what it's like to be a Carrier Dealer. Write for the GIANT Room Air Conditioner issue of "Inside Carrier"—the monthly magazine that's meant for Carrier Dealers only!

Mail coupon for GIANT "Inside Carrier"!

Carrier AIR CONDITIONING REFRIGERATION INDUSTRIAL HEATING

CARRIER CORPORATION, 310 S. Geddes Street, Syracuse, New York
I want that free GIANT Room Air Conditioner issue of "Inside Carrier" and the name of my nearest Carrier Distributor.

I'd also be interested in finding out more about:

☐ Carrier Residential Weathermakers ☐ Carrier System Weathermakers

☐ Carrier Self-contained Weathermakers ☐ Carrier Ice-makers

Name

Street

City

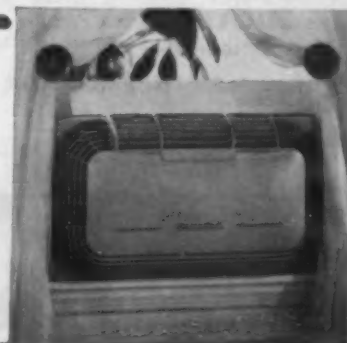
State

Look what you get from the Carrier Distributor!

- Financing and warehousing plans to ease your inventory problems! Your distributor carries a complete line to supply you within hours instead of days.
- Four retail financing plans designed to make payments painless! Give a prospect up to 36 months to pay. You can even sell him with no down payment in some cases!
- Advertising and promotional plans custom-built to your needs! Get the personal attention of a trained advertising man plus a special "Starter Package" to begin selling as a Carrier Dealer!

Look at the products you have to sell!

The Carrier Room Air Conditioner illustrated below has universal appeal! Carrier was first with "multi-mounting." You can install the new 1955 Carrier almost flush with the sill; you can install it in basement, casement, wall or even through a transom!



AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

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U. S. Patent
Office:
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REFRIGERATION *News*

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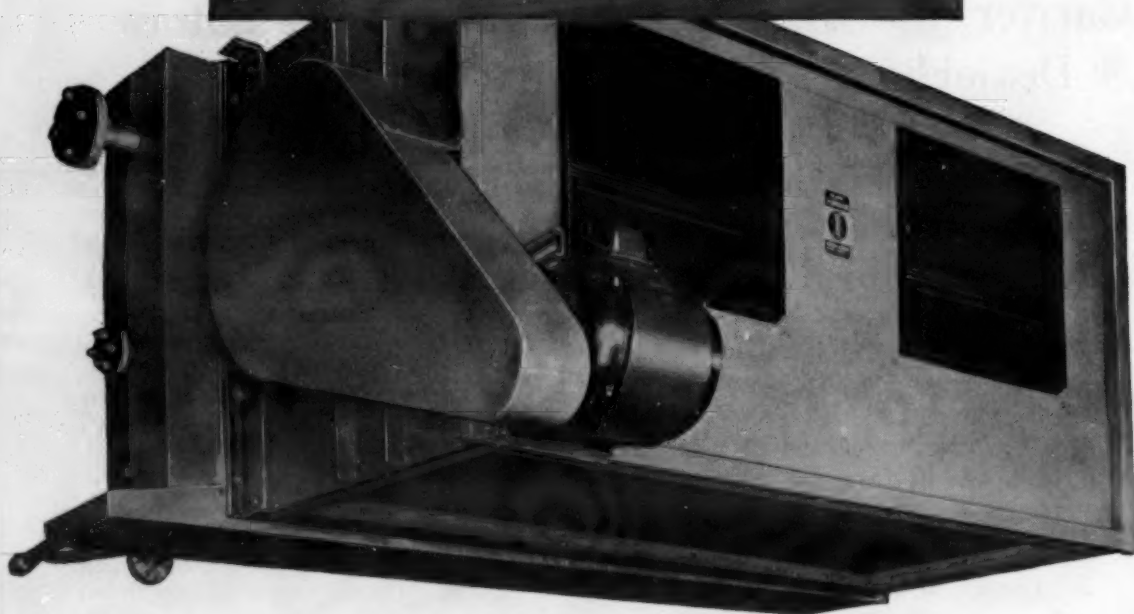
"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.

They'll Do It Every Time By Jimmy Hatlo

Announcing...

Extra-Large CAPACITY

THERMOBANK



for **FREON** and **AMMONIA**

NOW...no job is too large for the **KRAMER THERMOBANK**

The only completely automatic system for freezing temperatures offering these extra large capacities. THERMOBANK requires no manual attention whatsoever.

Ceiling mounted, THERMOBANK takes no

precious floor space. You can store products directly under the unit.

Can be used as an independent system or with an existing large system without affecting the operation of other evaporators.

WRITE FOR BULLETIN 294-6

KRAMER TRENTON CO. • Trenton 5, N.J.

Your Boss Needs Time Off To Recharge His Batteries

Overworked business executives, who never find time for a vacation, seem to be common in American industry. An American Management Association survey of corporate vacation policies and practices reveals this possibly alarming fact.

In contrast to the left-wing propaganda picture of a Boss—one who drops in at the office in between safaris to Africa, sunbathing in Florida to Bar Harbor and back to Palm Springs—most companies interviewed for this survey reported that they had a hard time getting vital personnel to take *long enough* vacations. Especially is that true when the decision is left up to the boss himself.

"Many hang on to the breaking point. Generally they are unwilling to take the vacation allowed, especially when it is more than two weeks," is a frequent commentation by the AMA fact-diggers.

Corporations which funded this AMA research range in size from 50 to more than 50,000 employees. And they represent a huge variety of businesses—including utilities, banks, advertising agencies, publishers, and manufacturing concerns.

Most boards of directors permit their top men to determine the period of their own vacations themselves. Yet, corporate directors revealed to AMA that their most valuable men didn't take enough time off for *their own* good, or that of *the company*.

Specific vacation allowances ranged from nine weeks for senior officers to one week after a year's service. Biggest and most prosperous corporations, it was found, insist on at least one month's vacation for top management, and three weeks for top salesmen.

Many firms which provide liberal vacation policies split summer and winter holidays. Florida vacations are more attractive to sales and advertising vice presidents than for home office managers, it seems. Office-tied executives tend more toward summer tours and northward hunting trips.

Unanimously it was reported that vacation policies for salaried personnel emphasize length of service as the basis for deciding the length of vacations.

Consensus of these policies: a week's vacation before the end of the year for everybody. Longer vacations require two, three, or five years of service to qualify. Nearly 80% of the surveyed firms grant three week's vacation to employees who've been on the payroll 10 to 15 years; and about a third grant four to 12 weeks after 25 years of service.

Corporations which stick to graduated-scale vacation policies (wherein years of loyalty to the company are a factor) tend to have longer vacation maximums.

Net of all this: the more substantial the business, the more important *long* vacations are deemed for people the corporation wants to KEEP.

Now **BRUNNER** SINCE 1906

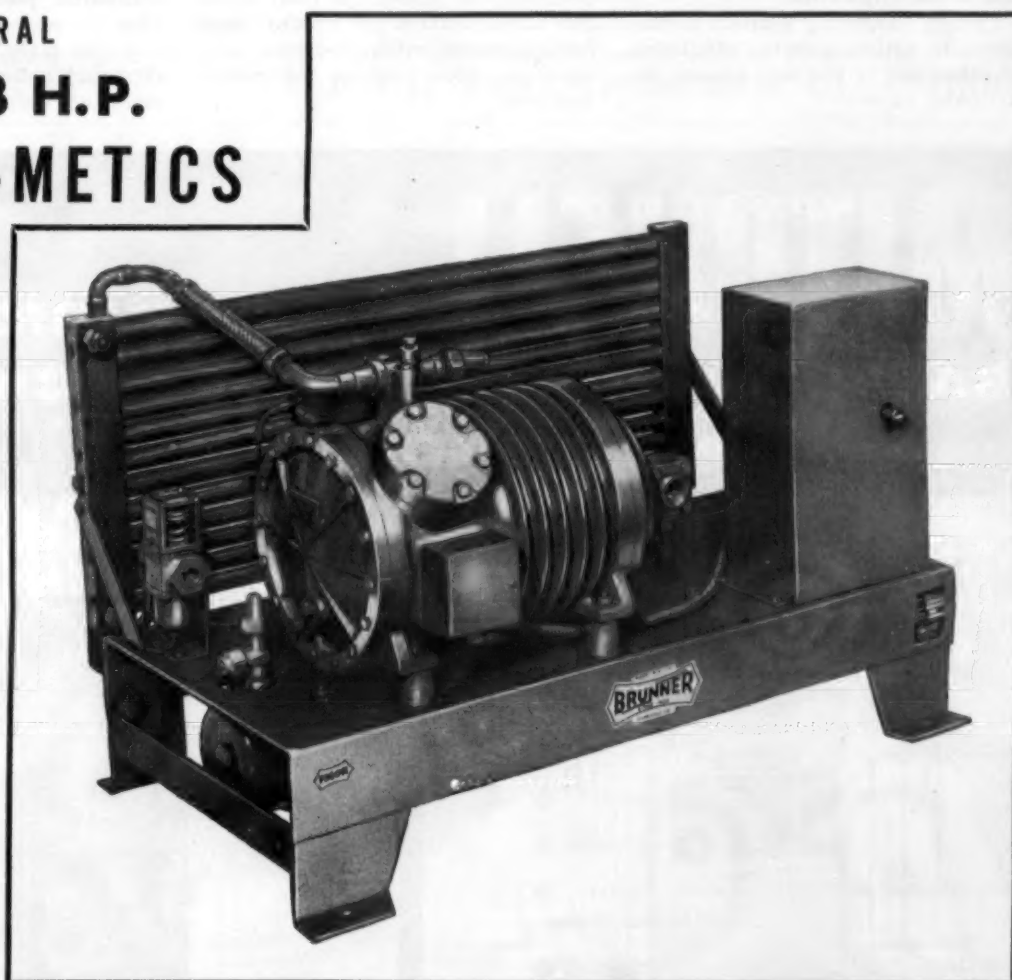
OFFERS A COMPLETE LINE OF SEMI-HERMETIC REFRIGERATION CONDENSING UNITS

New

INTEGRAL 1½, 2, 3 H.P. BRUNNER-METICS



**AIR-COOLED
BRUNNER-METIC . . .**
now offered in 1½, 2 and
3 H.P. models. Other Air-
Cooled Brunner-Metics avail-
able in ¼, ½, ¾ and 1 H.P.



**WATER-COOLED
BRUNNER-METIC . . .**
now offered in 1½, 2 and
3 H.P. models. Other Water-
Cooled Brunner-Metics avail-
able in ¼, ½, ¾ and 1 H.P.

THESE INTEGRAL BRUNNER-METIC COMPRESSOR FEATURES LEAD TO BIGGER SALES AND PROFITS

1. Improved serviceability — bolted construction permits easy field servicing . . . removable compressor head angled for easy loosening of head bolts, lowers head room requirements . . . valve plate easily replaced.
2. Oil snifter plugs allow positive check on oil level.
3. No oil pump failures . . . forced lubrication by slinger wheel feeds oil through drilled crankshaft.
4. Large area suction strainer, easily serviced by removing only the flanged suction service valve.
5. Motor cooled by cold suction gas returning to compressor.
6. Cylinders integral with main bearing and motor housing casting. Fins on motor housing help dissipate heat. Compressor feet are integral parts of main casting.
7. Precision bored and honed cylinders. Full floating piston pin.
8. Motor stator pressed into compressor housing for perfect alignment and effective heat transfer.
9. Improved compact, lightweight construction . . . aluminum alloy pistons and connecting rods . . . heads and valve plates made of high grade, dense cast iron, shell molded.
10. Main bearings of precision bored bronze sleeves . . . large bearing area. Crankshaft of high grade, shell molded cast iron . . . statically and dynamically balanced.

Now you can offer Brunner-Metic Semi-Hermetic Refrigeration Condensing Units for applications requiring up to and including 3 horsepower. This boost in capacity gives you many new opportunities for extra customers and profits from the Brunner-Metic line.

There's a Brunner-Metic for new or replacement use in almost every commercial and low-temperature job, where dependability, economy and capacity are absolutely essential.

These new integral Brunner-Metics, like the fractional horsepower units, are compact . . . completely adaptable . . . lightweight . . . quiet . . . designed and built for easy servicing on the job. No special service training required. Should

adjustments or repairs become necessary, any experienced refrigeration serviceman can take care of them on the spot. With this complete Brunner-Metic line . . . engineered all the way for top performance . . . you can now satisfy more customers who rely on the Brunner name for dependable refrigeration.

See your Brunner distributor, or write today for complete information.

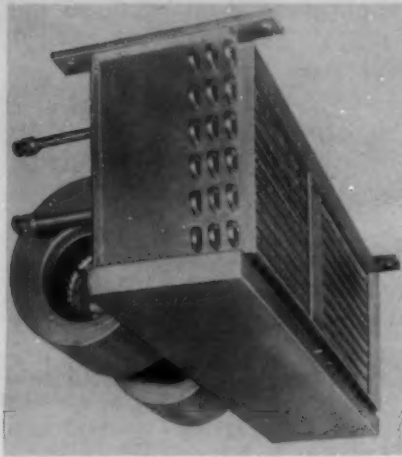
THE BRUNNER CO., Dept. A-245, GAINESVILLE, GA.
Brunner Manufacturing Company, Utica, New York
In Canada: Brunner Corp. (Canada) Limited, Toronto, Ont.

HERE'S THE COMPLETE BRUNNER-METIC LINE . . .

AIR-COOLED	¼ H.P. through 3 H.P.
WATER-COOLED	½ H.P. through 3 H.P.
AIR-AND-WATER COOLED	½ H.P. through 3 H.P.
CAPILLARY TUBE MODELS	¼ H.P. through 1 H.P.
TRUCK UNITS	½ H.P. through 3 H.P.

What's New

When requesting further information on new products, please use "Information Center" form.



Peerless Announces New Line of Evaporators

KEY NO. E-240

CHICAGO—A new line of direct expansion evaporators with blowers has been announced by Peerless of America, Inc. here. The units are available in 1/2, 1, 1 1/2, and 2-ton capacities.

Ceiling mounting permits installation in attics, closets, vestibules, or other out of the way places, the company says.

Honeywell Offers New Soft-Seat Solenoid Valve

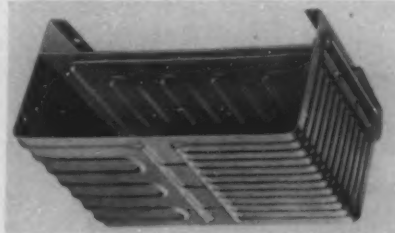
KEY NO. E-241

MINNEAPOLIS—A new solenoid valve which uses a spring-loaded synthetic valve and introduces other new features to assure more positive seal-off is announced by the Minneapolis-Honeywell Regulator Co.



The "soft-seat valve," made of Buna N rubber, is so durable it should never need to be replaced and is soft enough to help reduce the possibility of leakage caused by foreign particles which may lodge in the metal seat, the company said.

Easy installation of the valves can be made by use of a "rotatable" head which makes it unnecessary to loosen the body union nut to re-position the conduit spud for alignment with electrical connections, according to the manufacturer.



Evaporators Get Zinc Base, New Type Finish Coat

KEY NO. E-242

N. CHICAGO, Ill. — Domestic evaporators manufactured by the Houdaille-Hershey Refrigeration Div. here are now being electro-zinc plated, then completed with a new type finish, the company has announced.

The plating operation is said to provide a highly durable and very ductile basic metal protection. The new type finish coat, developed by du Pont, surpasses all established standard humidity test requirements, the company further declared.

Certain basic colors, in addition to white, are now available in the new finish.

Other production features include furnace brazing in controlled-atmosphere furnaces to get a clean refrigerant system, smooth contoured plate-on-plate construction to prevent frost pinch, and full size integral headers for peak efficiency under changing loads, the company indicated.



42-In. 'Twin' Includes 6-Cu. Ft. Refrigerator

KEY NO. E-243

LOS ANGELES — A kitchen combination unit called the "General Chef 42-in. Twin" and including a 6-cu. ft. refrigerator with shelves in the door, plus either an electric or gas range with oven and broiler and double sink combination is being produced by General Air Conditioning Corp.

The combination complete with garbage disposal unit is finished in any of five wood grain finishes with matching porcelain top or stainless steel top, or with conventional white finish and top.

The unit won grand prize in the home furnishing field in the fourth annual Hess Brothers "Versatility In Design and Use" contest.



Color, Design, Control Featured In Water Heaters

KEY NO. E-244

MILWAUKEE — Color, squared shape, and a new eye-level temperature control knob are features of the 1955 line of water heaters introduced by Permaglas Div., A. O. Smith Corp.

Heaters, both gas and electric, will be available in aqua, copper, and white and are designed to harmonize with kitchen and laundry equipment. The "Eye-Hi" temperature control permits fingertip operation at a convenient level.

Electric models are available in capacities from 6 to 80 gals. Gas models have capacities of from 20 to 65 gals.

Storage Unit Designed for Soft Ice Cream

KEY NO. E-245

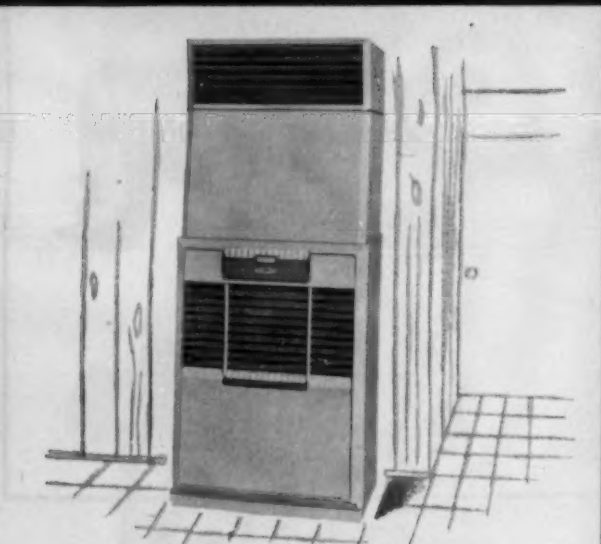
PUNXSUTAWNEY, Pa.—Punxsutawney Co. has announced a new line of mix storage cabinets particularly designed to meet the requirements of the soft ice cream stands as well as milk and other bulk storage.

Called the Beverage-Air mix cabinets, they are available in sizes from four to 12 10-gal. cans in six models finished in enamel or stainless steel.

Fountainettes are available as an accessory. When used as a refrigerator for special sizes or products, one or more sections of the cooler can be supplied with adjustable shelves.

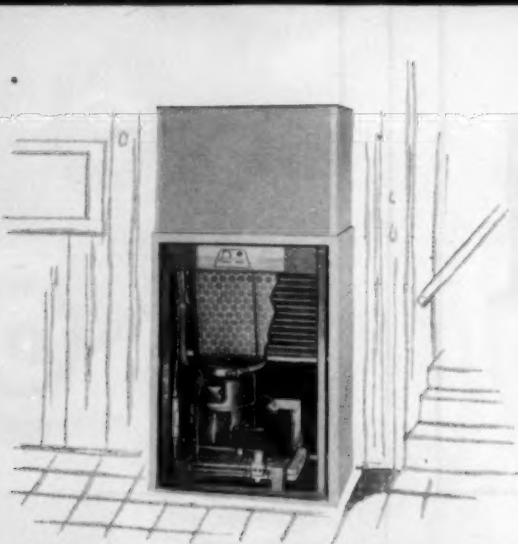


MITCHELL ...YOUR BIGGEST SALES OPPORTUNITY IN PACKAGED AIR CONDITIONERS



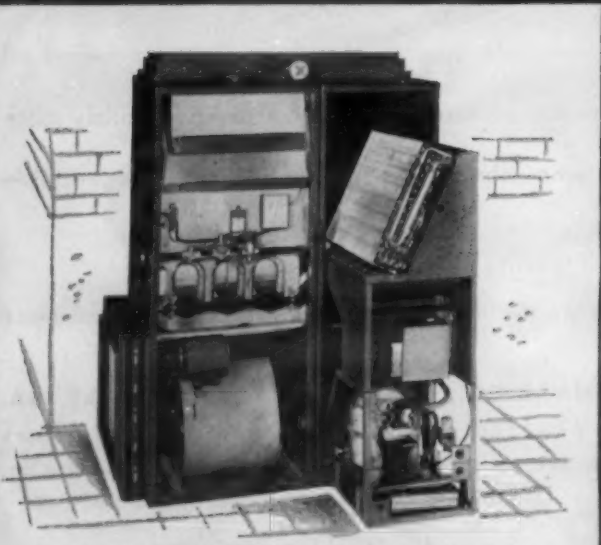
COMMERCIAL AIR CONDITIONER
2, 3, 5 & 7 1/2 Ton Air and Water Cooled

Ideal for commercial and industrial air conditioning. Includes hermetic refrigeration chassis, powerful blower section and air distribution plenum.



RESIDENTIAL ADD-ON AIR CONDITIONER
2, 3 & 5 Ton Air and Water Cooled

Converts present warm air heating system to a year 'round air conditioning system with this powerful Mitchell Add-On unit.



YEAR 'ROUND AIR CONDITIONING

1 1/2, 2 & 3 Ton Air and Water Cooled with Gas Fired Furnaces from 70,000 to 150,000 BTU/hr.

For new construction and the replacement furnace market, these powerful year 'round air conditioners are versatile, compact, easy to install... the easiest to service.

It pays to tie-in with MITCHELL the accepted name in air conditioning

If you are an experienced Air Conditioning Contractor with an organization that can sell, install and service both commercial and residential air conditioners, Mitchell offers you a fabulous opportunity with a Direct Factory Franchise. Write today on your letterhead for complete information and literature.

MITCHELL

MANUFACTURING COMPANY

Dept. D-7 2525 N. Clybourn Ave., Chicago 14, Ill.
In Canada: Mitchell Mfg. Co., 19 Waterman Ave., Toronto, Can.

Information Center

For more information on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

What's New or Current Literature Available

Key No. Key No.
Key No. Key No.
Key No. Key No.
Key No. Key No.

Products Advertised
(list name, page, and issue date)

.....
.....
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.....

(PLEASE PRINT PLAINLY)

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Company
Street
City Zone State
Type of Business

MAIL THIS FORM TO

AIR CONDITIONING & REFRIGERATION NEWS
Readers Service Dept.

450 W. FORT ST.

DETROIT 26, MICHIGAN

What's New (Con't)

Freez-King Adds 'Economy' Models to Revamped Line

KEY NO. E-246

CHICAGO—Besides the streamlining and modernizing of its complete line of continuous freezers, Freez-King has added two new "economy" models, Freez-King Corp. announced recently.

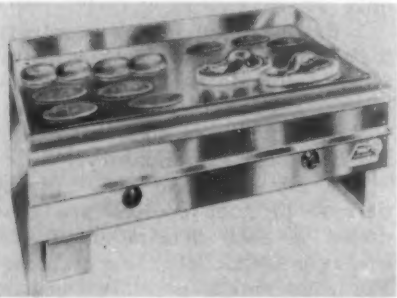


Model 150, which serves soft ice cream or frozen custard, requires 4 sq. ft. of floor space. The makers say that the sale of only a few gallons daily can pay for the equipment in a few months.

Among its features are the "Seeing Eye" dial that indicates at a glance if product is at the proper serving consistency; freezer reservoir which automatically refills with mix as the finished product is drawn off; and spigot or knife type draw off gate.

Model 160 is a shake dispenser which can serve up to 200 shakes an hour. It has a 2½-qt. refrigerated reservoir and 2½-gal. detachable mix reservoir.

Compressors in both models are warranted for 5 years.



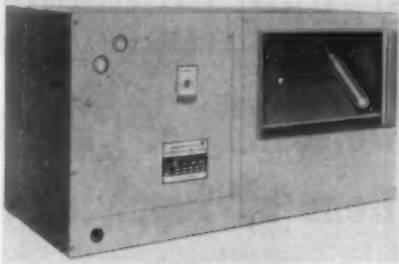
Griddle Has Thermostat Control for Uniform Heat

KEY NO. E-247

LOS ANGELES—"Thermo Griddle," a thermostat-controlled griddle combination for all-round frying, is being marketed by Wolf Range & Mfg. Co. Griddle is said to eliminate guess-work and offers temperature control for all frying requirements.

Thermo Griddle employs a 1-in. thick, polished steel plate which requires no "breaking-in" and enables uniform heat to be maintained with no "temperature drop." The surface is easily cleaned with cleanser and hot water; requires no pumice stone.

Features are: High raised edges to prevent grease splash; constant pilot for automatic lighting; wide front gutter with a large easy-to-remove grease can; high-speed burners. Thermo Griddles are 24 in. deep and 18 in. high. They are available up to 6 ft. in length with a thermostat for every 24 in.



Sunbeam Residential Cooling Unit Saves Space

KEY NO. E-248

ELYRIA, Ohio—A new, space-saving horizontal cooling unit for residential air conditioning has been introduced by Sunbeam Air Conditioner Div. of American Radiator & Standard Sanitary Corp.

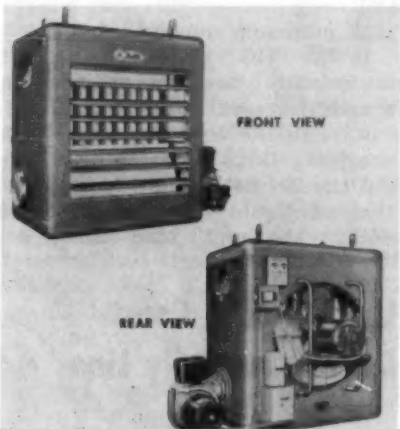
This self-contained model, with hermetically-sealed refrigerant circuit, water-cooled, is made without blower for use in conjunction with new or existing forced air heating systems.

Called the model HCA-2H or 3H, it is designed for easy installation with any modern blower-equipped furnace—basement type, horizontal, utility, or counterflow, and may be had in either 2 or 3-hp. capacity.

Sunbeam sales executives state that this new unit, which is slightly less than 44 in. long by 23 in. deep, and 23 in. high, readily fits into many air conditioning layouts where conventional units cannot be used because of space or ductwork limitations.

It can be mounted overhead, placed on ceiling joists in the attic, or suspended under the floor in crawl space.

Circuit is covered by a five-year warranty and the complete unit complies with the equipment standards of the Air-Conditioning & Refrigeration Institute, the company said.



Oil-Fired Unit Heaters In Wide Range of Sizes

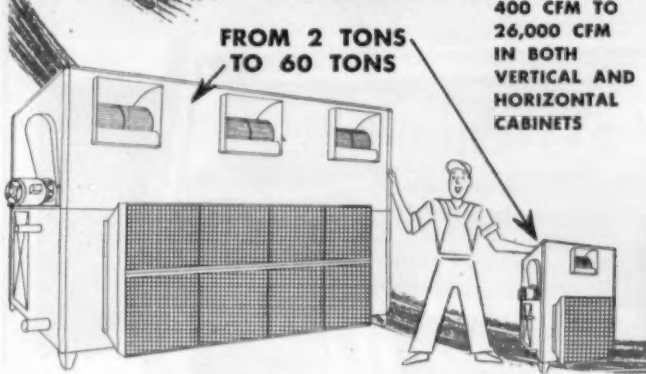
KEY NO. E-249

TRENTON, N. J.—Delta Heating Corp., manufacturer of oil-fired unit heaters using a conventional gun-type oil burner, has added 10 smaller sizes to complete its line of heaters.

Largest size, model UH220, has an output of 220,000 B.t.u./hr., equivalent to 900 sq. ft. of steam. In addition, oil-fired unit heaters are now available with output ratings ranging from 196,000 B.t.u. to as low as 112,000 B.t.u./hr. Units are offered with varying outlet air temperatures and noise levels to suit a particular installation, and for process and special heat applications.

Manufacturer claims that the heaters will operate with drafts as low as .01 in. The units are provided with adjustable louvers to control the direction of the heated air.

Range of sizes now offered will permit the installer to tailor-fit the heat requirements of the building through the use of the different size units, according to Delta.



COMPLETE FLEXIBILITY FOR YOU

Choose exactly what you want with Governair Air Handling Units. Secure more closely controlled balance of system load by simple selection of air handling component. 24 complete and individual sizes for greater flexibility.

OPTIONAL GOVERNNAIR FEATURES:

- Heavy-duty die formed face and by-pass dampers
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- Mixing boxes
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Manufacturers of Multi-zoned Air Handling Units, Packaged Air Conditioners, Evaporative Condensers, Cooling Towers, Blast Coils, and many others. Write for complete information and specifications.

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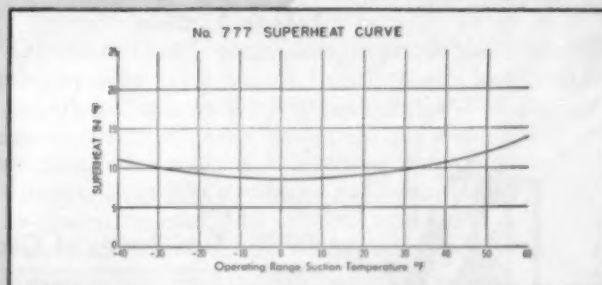
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with DETROIT Thermostatic Expansion Valves

- Capacities — ½ to 2 tons, F-12 — Standard Valve — 1 to 3 tons, F-12 — External Equalizer
- "C" and "Z" cross charges available
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With "C" charge . . . the long range valve . . .
For both high and low temperature operation.



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INSTANTANEOUS DRAFT
BEER COOLERS.
(With Refrigerated Faucets)

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Purcell Heads Carrier National Buyer Sales

SYRACUSE, N. Y.—Frank E. Purcell has been named national buyer sales manager, it was announced recently by John M. Bickel, vice president and general sales manager. Unitary Equipment Div., Carrier Corp.

Purcell has been closely connected with the sale and merchandising of Carrier unitary products during the 15 years he has been with the company.

Mueller Named Ad Head Of International Register

CHICAGO — Appointment of Ralph W. Mueller as advertising manager of International Register Co. has been announced by A. M. Kinney, president.

Mueller joined the company in 1953 as assistant advertising manager. The firm makes "Intermatic" time switches and appliance timers, "Meter-Matic" coin meters, and other precision products.

Swart Joins Staff of Allied Products Div.

SYRACUSE, N. Y.—Richard H. Swart, Sr. has joined the Allied Products Div. of Carrier Corp. as director of engineering, it was announced recently by Loren Fletcher, general manager of the division.

Swart, who has 34 years of experience in the air conditioning and refrigeration industry, has been a member of Carrier's Development and Research departments for eight years.

Commercial Refrigeration

Defrosting of Units Using Inner-Fin Coils Done by Supplying Heat To Inner Tube

WEST HARTFORD, Conn.—The "Inner-Fin" coil construction which Bush Mfg. Co. developed is being used in new models of low temperature systems which the company is now offering, reports Cecil Boling, president.

These include the "HG" line of hot-gas defrost unit coolers; "ED" electric defrost unit coolers; "Therm-O-Cycle" hot-gas defrost systems; and "GD" glycol defrost product coolers. The new products make use of the inner tube as the means for defrosting, Boling states.

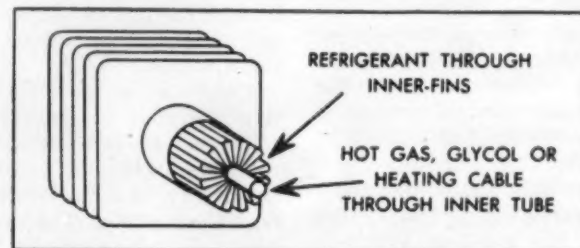
Fundamental principle of Inner-Fin coil construction is the ar-

pendence on the suction line or re-evaporator for this function.

Heat source for defrosting in the new Bush "ED" electric defrost systems is a specially designed heater cable contained within the inner tube.

The new Therm-O-Cycle hot-gas defrost systems utilize room air passed over a re-evaporator coil as heat source for defrosting. It is a complete "packaged system" comprising evaporator, re-evaporator, heat interchanger, timer, solenoid valve, and strainer.

According to Boling, the Therm-O-Cycle system can be used effec-



DRAWING shows construction of inner-fin tubing, and manner in which defrosting is accomplished "from the inside out" in various types of defrost methods.

range of longitudinal fins within the tube. A small inner tube is mechanically expanded locking the longitudinal inner fins in close contact with both the inner wall of the outside tube and outside wall of the inner tube.

All of the new Bush units thus defrost from the inside, Boling points out, and he states that the Inner-Fin coil design provides more rapid distribution of heat to the place where frost forms.

"Consequently," says the Bush executive, "coils defrost quickly and room temperature rise is kept at a minimum during defrosting."

In the "HG" systems, each unit is actually two-units-in-one: an evaporator and re-evaporator circuit, with the heat of compression providing the source for heat during the defrost cycle. Re-evaporation of liquid refrigerant occurs within the unit, eliminating de-

tively in place of the "HG" unit only where:

1. Installations have excessively high humidity with resulting heavy frost accumulation due to extraordinary conditions.

2. Specifications make an external heat source mandatory.

The new series of "GD" glycol defrost product coolers are produced in both floor-mounted and ceiling-hung models. Use of Inner-Fin coils makes possible compact construction, says Boling, and permits the use of an entirely separate defrosting circuit. This circuit consists of a pump, specially designed cast aluminum heater, and glycol (the defrosting medium).

Heated glycol is circulated within the inner tube, defrosting coils from the inside. Complete containment of glycol within the separate circuit eliminates dilution of the defrosting medium.

Union Ice on Coast Distributes Bally Line

BALLY, Pa.—Union Ice Co., San Francisco, has been franchised by Bally Case & Cooler Co. to distribute its entire line of refrigerated cases and coolers.

Union Ice, one of the oldest and largest refrigeration service organizations in the country, operates throughout California and Nevada, Bally reported. It has plants and facilities in 58 cities.

Union's activity in the refrigeration field dates back to 1882 when it came into existence as an ice delivery plant. The company played an important part in the development of California's fruit and vegetable industry by devising methods for refrigerating and transporting the crops to markets, it was pointed out.

In addition, it was a pioneer in the development of methods for quick freezing foods. Today, Union Ice is a leading processor, storer, and distributor of frozen foods in the West.

Takes Allen Cooler Line

DETROIT—The Frank-Dewey Co., Inc. here has announced its appointment as exclusive distributor for the Allen Cooler "All Electric" truck refrigeration units.

The sales and service program will be under the supervision of Marvin D. Swain.

Hugh Smart Is Named Copeland Representative

SIDNEY, Ohio—Appointment of Hugh D. Smart as Chicago area sales representative has been announced by Copeland Refrigeration Corp.

Before joining Copeland, Smart served as executive vice president of Refrigeration Appliances, Inc., of Chicago. He had been associated with that firm 18 years.



H. D. Smart

SUPER-FLO

FILTER-DRYER

UP TO 5 TONS

NO PRESSURE DROP

MOLDED REMCAL DRYING FIBERGLAS DEPTH FILTERING

Check Super-Flo's amazing low price, for both original equipment and replacement, against ordinary driers which do not have Super-Flo molded drying elements, massive fiber-glass depth filters and spun-copper shells. Available to the trade through wholesalers everywhere.

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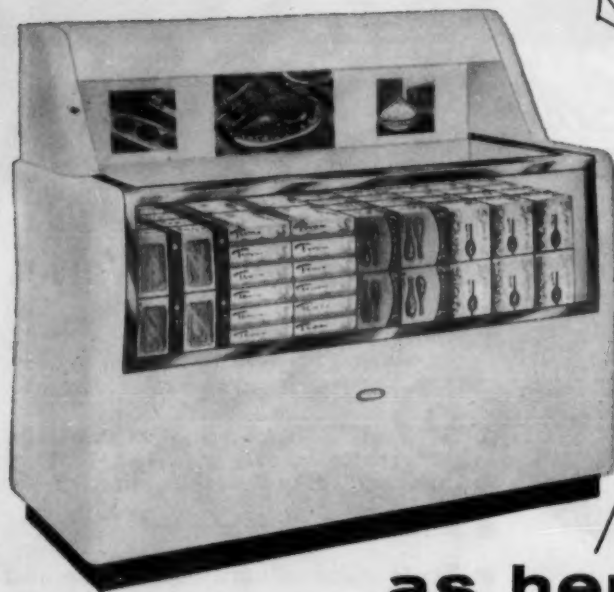
MORE PROFITABLE THAN EVER...

A natural sale to fruit stands, drive-in groceries, and many larger operations. DEW-MAKER refrigeration maintains fruits, vegetables at their prime. Merchandise dairy and meat items as well. Faster sales, more profit! Your profits increase too.

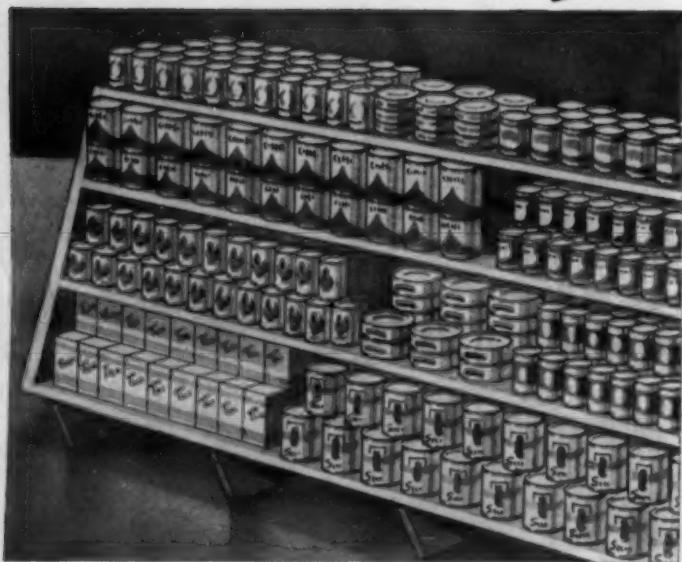
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DEW-MAKER

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It's just as true here...



as here!



Turnover starts with a customer reaching for a package. And display is what makes the customer reach. It's just as true with refrigerated foods as it is with any other product the grocer sells.

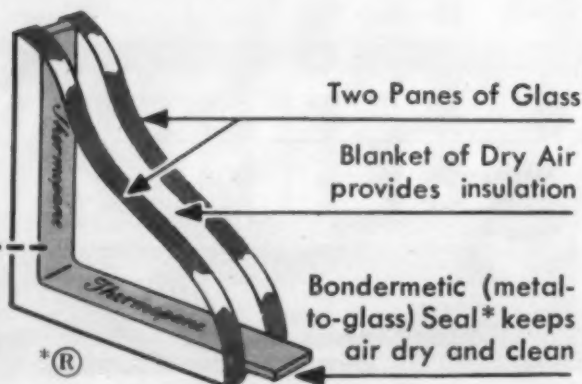
That's why alert refrigerated case manufacturers design their cases with large glass areas and use *Thermopane** insulating glass. Only *Thermopane* has the famous *Bondermetic Seal** which prevents condensation between the panes of glass and keeps dirt out. In *Thermopane* there is no organic material to deteriorate.

Make sure your cases display the merchandise. And make sure the glass is *Thermopane*. You'll find the name "*Thermopane*" imprinted on the *Bondermetic Seal* between the panes.

LIBBEY-OWENS-FORD GLASS COMPANY
608 Madison Avenue
Toledo 3, Ohio



Thermopane
INSULATING GLASS



LOOK FOR THE NAME ON THE SEAL BETWEEN THE PANES

Service & Supplies

Cleaning Ice Cube Makers

How To Do It and What To Use for the Job

DAYTON — Dissolved solids in water used in ice cube makers can be troublesome in the freezing operation and can result in service troubles.

To avoid such troubles, Frigidaire Div. of General Motors Corp. has recommended to dealers that ice cube makers be cleaned regularly and has informed them of water treatment methods available.

In its service publication "Tech Talk," it discussed the water problem and outlined a method of cleaning the cuber.

The discussion follows:

In the process of freezing, water has a tendency to reject dissolved impurities and freeze only pure water. The more dissolved solids, the more troublesome is the freezing operation with the bicarbonates being the worst offenders. Scaling on the freezer plate is generally calcium carbonate from the breakdown of calcium bicarbonate.

The calcium carbonate will clog the distribution header, water flow device, sump, impeller, and float valve mechanism; if the concentration is extremely high, cloudy cubes result. In extreme cases, mushy ice may result.

2 TYPES OF WATER TREATMENT

To prevent these problems, two types of treatment are commonly employed, phosphate treatment and water softening, both of which have been discussed previously. A glassy phosphate feeder can be installed in the line or a suitably sized water softener can be used.

In ice cube makers using a circulating system, such as Frigidaire, there is less chance for mushy or soft ice since most of the minerals are rejected by the freezing process and remain in the sump water. When the mineral content is high, not all of the minerals are rejected and some remain in the ice to cause soft or mushy cubes. The use of a glassy phosphate, water softener, or possibly a third type treatment, called de-ionization, may be used.

Recent developments in the water conditioning industry have brought the new anion exchange resins within reach of the average commercial user. These resins form the basis of the new de-ionization process which removes all the dissolved ionizable solids from the water. This method is more expensive than the other two methods mentioned.

Iron and manganese occur in many rural water supplies and occasionally in city supplies as well. Special iron and/or manganese filters are necessary. These filters can be purchased or rented.

Serious corrosion of ice cube maker parts can result from water with high acidity. Again, a polyphosphate can be used to coat the parts with a protective film. An alkaline neutralizing filter also can be used.

PERIODIC CLEANING VITAL

Even though water treatment is used to combat lime and mineral deposits in the ice cube maker water system, it is recommended that it be cleaned periodically.

For doing a satisfactory cleaning job, the following acids are recommended: Citric or Tartaric. These may be purchased at any drugstore in a powder form and should be mixed in the proportion of 3 to 6 oz. of powder to ½ gal. of water (5 to 10% solution).

Cider vinegar can also be used full strength; however, this may leave an objectionable odor or

taste for a while afterwards. Acid dairy cleaners can be used provided they do not contain a detergent, (detergents foam and the foam is difficult to rinse out of the system). In addition to the acid solution, an acid neutralizer of four tablespoons of baking soda to a gallon of water is needed.

STEPS IN CLEANING PROCESS

After selecting the acid cleaning agent, mix a ½ gal. quantity in a glass or porcelain container. If possible, get the solution hot (200° F.) and proceed as follows, leaving the unit running:

1. Remove the cabinet top, freezer cover plate, machine compartment louvered panel, water recirculating reservoir access panel, and water recirculating reservoir splash baffle.

2. Close the liquid line valve at the receiver.

3. Turn off the water supply to the cabinet.

4. If there is an ice slab being made, hold ice cubes against the thickness control disc and on the capillary tube coming out of the disc. This will stop the pump and result in the hot gas solenoid being opened and thus release the ice slab. If the water does not siphon from the water recirculating reservoir, add enough water to cause it to siphon. Discard any cubes in the bin and remove the false bottom from storage compartment.

5. Gradually pour the ½ gal. of acid solution over the evaporator to avoid splash. If a foaming action results, stop pouring the solution until the foam diminishes, then add more. Adding more than ½ gal. may fill water recirculating reservoir too high and cause it to siphon.

6. Permit the pump to circulate the solution until all visible deposits are removed. It will be necessary to use a brush on those parts which the solution does not contact well. If necessary, parts such as the splash baffle, water distributor and top cover can be removed and cleaned with some of the acid solution and a brush. This should be done at the end of the cleaning period as stopping the unit to remove the parts will cause the solution to siphon off.

CAUTION ON ACIDS

Caution: These acid solutions may burn the skin or eyes if left on very long. Therefore, flush off with clean water if it comes in contact with the body. Also, flush the acid off the porcelain cabinet parts with the neutralizer solution, as the porcelain is not acid resistant. Do not use these acid solutions any longer than necessary to clean the system as they may gradually attack the metal.

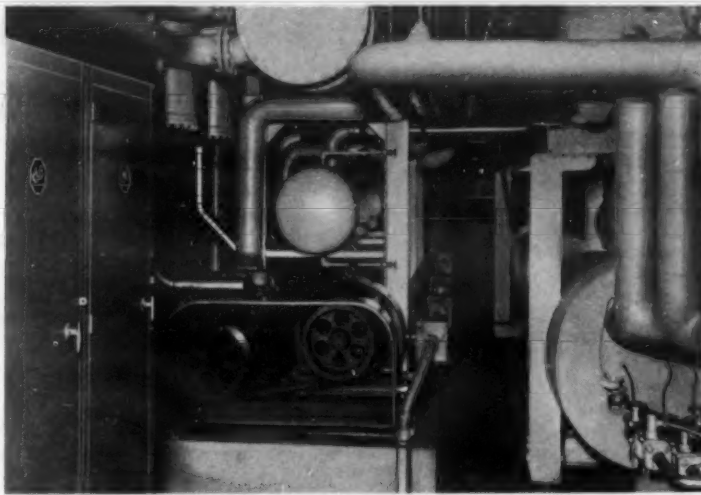
If the acid solution seems to lose its strength, siphon it off and use another ½ gal. of solution. Repeat as necessary.

7. Siphon off the acid solution and pour ½ gal. of the acid neutralizer over the evaporator, permitting the neutralizer to circulate and siphon off. Follow with two ½ gal. rinses of clear water, permitting each rinse to circulate and siphon off. If the second water rinse still has an odor or taste, continue to rinse with water. Neutralize and wipe off any acid solution or water splashed on the cabinet and storage compartment.

8. Turn on the water supply and open the liquid valve.

9. Check to be sure the unit is operating satisfactorily and discard the first cubes made.

10. Replace the cabinet top, access panels, etc.



Above is shown a Schnacke air-conditioning system equipped with 5 Allen-Bradley Bulletin 746 autotransformer type automatic starters in an Evansville, Indiana, store.

The double break, silver alloy contacts need no filing, cleaning, or dressing. The one-piece solenoid construction eliminates troublesome pins, pivots, and

bearings which may corrode and stick. The overload relays give dependable overload protection, no matter how long they have been inactive. Write for Bulletin 746.

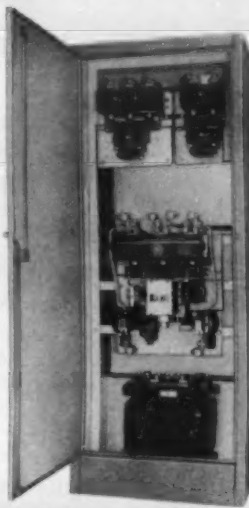
Allen-Bradley Co.
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Reduced Voltage Starters for Air Conditioning and Refrigeration Service

For automatically starting squirrel cage compressor motors of reduced voltage, the Bulletin 746 autotransformer starter is ideal.

The entire starting cycle is automatic. It reduces the starting current and switches the motor from starting to running taps. Just press the START button or close the pilot control circuit, and the Bulletin 746 autotransformer starter accelerates the motor to full speed.

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Low Original Cost!

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Company Name.....
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Carr Heads Southern Equipment A. C. Dept., Two Others Named

SAN ANTONIO — Southern Equipment Co., local wholesale organization, has announced the appointment of Thomas J. Carr as manager of its rapidly-expanding Heating & Air Conditioning Dept.

Carr for many years was manager of the Commercial Refrigeration & Air Conditioning Div. of General Electric Corp. of New Orleans.

E. E. Edge, executive vice president and general manager of Southern Equipment, also announced two other appointments. Manor LaBatt has been appointed district manager of the San Antonio area.

In addition, Dennis Ware was named district service manager of the 52 southwest Texas counties served by Southern Equipment for General Electric heating and air conditioning products.

Carr has spent his entire business life in the electrical, utility, appliance, and air conditioner fields. After graduation from Memphis State university, he joined Memphis Power & Light Co.

In 1950 he joined the executive staff of General Electric Supply Co. of New Orleans and later became district manager of the Air Conditioning & Commercial Refrigeration Div.

Oklahoma Judges Add \$50,000 to Courthouse Air Conditioning Fund

OKLAHOMA CITY — Oklahoma county district judges recently voted a \$50,000 contribution to the fund for air conditioning the courthouse.

Presiding District Judge A. P. Van Meter made known the grant from the court fund will be available, if needed, for the work.

As previously reported, county commissioners have \$250,000 set up in the budget for the project, which makes a total of \$300,000 now authorized.

According to W. J. Collins, engineer, the required 450 tons of refrigeration and necessary ductwork can be installed in the six floors of the courthouse in 90 days.

Hospital Residents In Drive To Pay for Air Conditioners

SPARTANBURG, S. C. — The Spartanburg County Board of Control has approved plans for installation of air conditioning facilities at the new \$300,000 Woodruff hospital.

Woodruff residents have launched a drive to pay for individual air conditioning units to be installed in each room at a cost of \$400 each. A check for \$4,000 was given to the county board recently.

Evans Ups Production Of Commercial Cases With New Facilities

MT. VERNON, N. Y. — In its recently completed new production facilities at 30 Haven St. here, Evans Mfg. Co. is now in expanded production on the lines of self-contained commercial refrigerators which it produces.

Inauguration of activities in the new plant also coincides with the 10th anniversary of the company, since it was on Feb. 14, 1945, that the first full-vision dairy case made by Evans was crated for delivery, the firm having been formed shortly before by Joseph Evantoff and Dave Goodman, who between them have some 45 years' background in the commercial field.

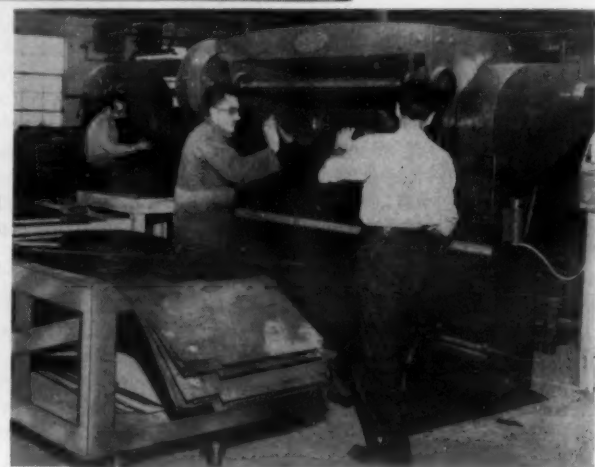
The original plant was at 460 S. 10th Ave., Mt. Vernon. However, as volume mounted and the line increased to 21 models, it became necessary to increase facilities three times. In 1953 the Evans management realized that the original facilities and additions were becoming inadequate.

The new plant has a conveyorized assembly line, modern painting, drying, and baking equipment, and the latest type of facilities for present day sheet metal and welding operations.

The new production facilities



DAIRY AND BEVERAGE WALL CASES on the production line. Demonstration of mass production technique now in practice at Evans Mfg. new facilities.



A STEEL SHEET is inserted in one of the many power brakes for forming steel.

will have no effect on Evans Mfg. Co.'s policy of concentrating on the self-contained type of commercial refrigerator on which it has specialized. Evantoff believes that this type of equipment has met favorable response from the dealer and the purchaser because it eliminates expensive installation charges and cuts down on service and maintenance charges. Also, with this type of product, Evantoff feels that the dealer selling on the instalment plan can, in

case of default, repossess the equipment, clean it and resell it.

"The new line is geared primarily to the operations of the small neighborhood retailer and the dealer knows that the retailer of today demands sound refrigeration with a minimum of service calls," he says.

However, the new plant will permit the company to offer wider distribution through centrally located warehouses in large cities that will hasten and simplify deliveries.

Knowles Named Richardson Exec. V. Pres., Director

NUTLEY, N. J. — Gerald N. Knowles was named a director and executive vice president of Richardson & Richardson, Inc. here at a recent meeting of the board of directors, according to L. Lee Richardson, president.

Knowles has been with the company since 1951 and has served as general manager for the past year. He will continue in that capacity.

Established in 1933, Richardson & Richardson is one of the largest commercial and industrial refrigeration and air conditioning contractors in the east, it was reported. Its operations, including the Motel Conditioning Div., extend from Boston to Washington, D. C.

Knowles' experience in the re-

frigeration field covers a 25-year period. Prior to joining Richardson, he was midwest representative of Brunner Mfg. Co.

Here's why you should handle the quality line of air conditioning and refrigeration



York Craftsmanship... we call it *Yorkmanship*... has made York products the quality standard of the industry. Now, more than ever before, it's important for you to take the quality road to air conditioning and refrigeration profits. Buyers have become more discriminating. Even if you handle a price line, you ought to have the *quality leader*.

Here are five of the many reasons why your business will grow with the Quality Name in Air Conditioning and Refrigeration:

- Over 70 years of leadership in developing product feature "firsts."
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- The industry's most modern research laboratory.
- An experienced distributor to help you get the most of a billion-dollar market.

Yorkmanship combined with *Salesmanship* has produced a powerful new program to push sales of the nation's finest line of air conditioning and refrigeration appliances. Act now. Put *Yorkmanship* to work for you. Get an early start by using this coupon today!

The 1955 Yorkaire Year-Round Residential Air Conditioner—a beautifully engineered unit. Makes you best in the field!



Yorkaire Room Conditioners for 1955 have the features which have made York Quality famous—and more!



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Ice-Cel UNITS

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FOR HEAVY LOADS
OF SHORT DURATION**



Fourth Church of Christ Scientist
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First Baptist Church
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44 Elgin Street, Brantford, Ontario



HYDRALINE Boiler-Chiller Package

New Hydraline 'Wet' System Is Complete Package

DETROIT—Hydraline Products Div. of Borg-Warner Corp. has announced development of a gas-fired hot water boiler and water "chiller" combined in one compact "package."

This is believed by the company to be the first such combination specifically engineered and designed for modern forced water year-round air conditioning systems in medium-sized homes and small commercial structures.

"Up until now most such installations have required undue attention to installation procedure because of the difficulty of coupling together liquid heating and cooling units not originally designed as companion pieces," the company said.

The Hydraline central system of forced water heating and cooling utilizes individual in-wall room units, and features individual room temperature control. The in-room units are fully recessed in walls.

"Besides incorporating the desirable features of uniform and quiet forced-water heating and cooling, each unit is equipped with a blower (of variable speeds) to provide filtered air circulation in each room," it was explained.

"Units in any room may be turned up or down, or cycled automatically with individual thermostats, without affecting heating elsewhere in the structure—this operation, independent of the central system, guarantees positive heating (or cooling) balance in the most rambling type of structure.

The Hydraline boiler-chiller combination takes up only 2 ft. square on the floor in its vertical position and can be installed in the basement, utility room, or elsewhere in accordance with local building codes, the company pointed out.

"The height of the complete 'package' is only 66 1/2 in.—however, when it is desired, because of little head room or other limiting factors, the chiller and boiler packages may be placed side by side," it was stated.

"The boiler unit is furnished completely assembled with water circulator, burners, controls, and operating parts in place. It is shipped ready to be connected to water supply and return lines, gas supply and electrical service. The unit is A.G.A.-approved for all gases and for use on combustible flooring. The boiler design incorporates the most modern safety devices.

"The companion chiller is factory assembled and shipped complete with evaporator, condenser, refrigeration, and electrical controls. As with the boiler, this unit is self-contained in a chrome-trimmed, grey enamel cabinet."

Residential Air Conditioning

Coleman System Claims 'Balance' In Air Handling

PHILADELPHIA—A system for "completely automatic balanced year-round air conditioning in the home" was unveiled at the International Heating & Ventilating Exposition by Coleman Co., Inc.

The company claims the system "enables dealers, contractors, and speculative builders to offer fully-balanced heating and cooling that works without attention from the homeowner."

"The homeowner need not adjust a damper, touch the thermostat, or flick a switch, but the temperature in every room stays constant, regardless of the season of the year."

Sheldon Coleman, president and general manager of the firm, explained that the key to the balancing system is a new vertical cooling unit, which is used to supplement a Coleman "Blend-Air" plenum cooler mounted on top of the furnace.

The vertical cooler is made in

1, 2, 3, and 5-ton sizes. It has its own blower, cooling coil, and supply duct system, but may use a common air return.

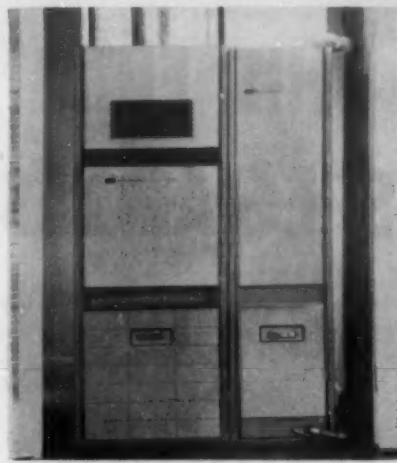
When heating is needed, he said, the furnace and furnace blower operate in their normal manner, supplying heat to the house through a distribution system adjusted for the best possible heating balance.

"When cooling is needed," it was stated, "a thermostat of the automatic changeover type starts the air conditioning equipment and operates both the furnace blower and the vertical cooler blower. The furnace blower supplies cooled air through the same ducts used in heating."

"The vertical unit supplies cooled air through its own duct system to the rooms that require greater proportionate amounts of cooling than of heating."

In explaining the problem that led to development of the balancing system, Coleman said:

"When air flow in a warm-air heating system is properly balanced, rooms on the north and either the east or the west sides of the house normally require a greater relative proportion of the heated air than do other rooms."



COLEMAN Year-Round System

"Such balancing is usually accomplished by manual adjustment of dampers in the runs, partially closing off the flow of air to those rooms that would otherwise receive too much heated air."

"When air flow is properly balanced in a cooling system, rooms on the south and west sides of the house normally require a greater relative proportion of the cooled air than do other rooms."

"Further, in a properly balanced cooling system, rooms such as kitchens, where heat is produced, and such as living or recreation rooms, where larger groups congregate, require greater relative proportions of cooled air."

Coleman asserted that efforts to compromise between heating and cooling requirements "create a problem for the homeowner."

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AIR CONDITIONING

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now recognized as one of the most important factors in reducing the power load required for efficient air conditioning—are made by Rusco, from the finest quality metals. Available in a wide range of sizes and colors to meet all building requirements. These Rusco products are permanent once they're installed. There's nothing to change with the seasons—or store! You can recommend Rusco shading devices—with confidence!

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is especially designed for room air conditioning units. Made to fit any size window opening, this unit completely eliminates makeshift, unsightly installation—gives you a bright, clean-appearing job that helps sell more air conditioning! Eliminates sealing problems and is available with insulating sash, for double glass insulation, which gives maximum air conditioning efficiency.



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THIS FIRM SPECIALIZES IN CHURCH COOLING

Ice Storage System Solves Problem of High Heat Load, Intermittent Use

By C. Dale Mericle



NURSERY of Grace Temple Baptist church in Dallas is one of areas served by "Tresco Latent Power System" of air conditioning.

DALLAS—Specializing in church air conditioning, Texas Refrigeration & Engineering Co. here has installed cooling for more than 50 churches in the past six years, according to Frank M. Angus, owner of the contracting firm.

All of these jobs have employed the ice-storage principle, which the contractor has been promoting as the "Tresco Latent Power System."

Reasons for this are best explained in a highly attractive brochure recently prepared by Texas Refrigeration to describe its installation for the Grace Temple Baptist church here.

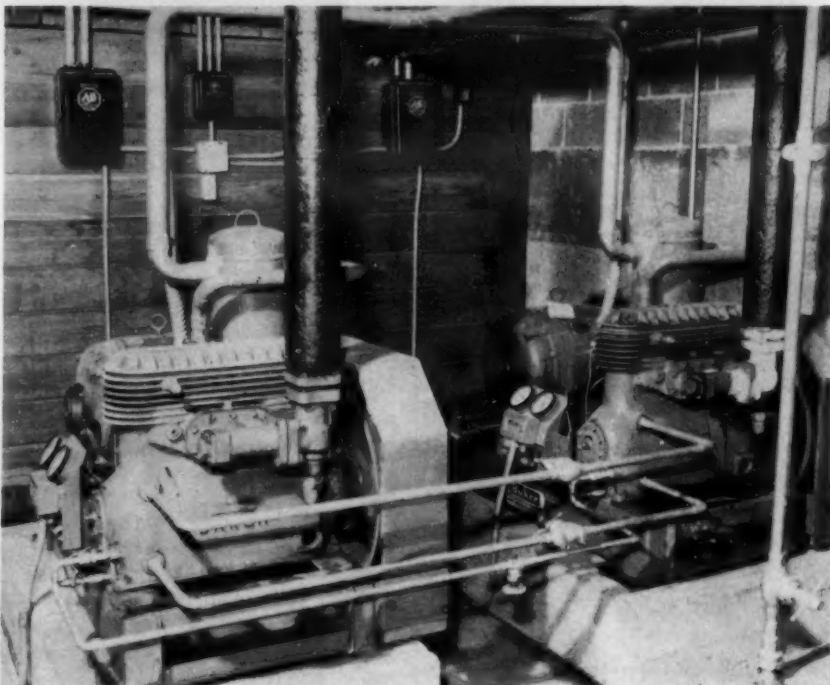
"Church air conditioning presents many problems not found in a conventional commercial installation," the brochure points out.

"First, a commercial place that is cooled all day doesn't have much time to warm up at night, whereas a church auditorium or educational building may be unoccupied for three or four days with the terrific heat building up in the walls, furniture, etc.

"This makes it entirely unsatisfactory to use conventional equipment for one area, and then switch it over to another since it does not have the additional tonnage to off-



AUDITORIUM of church is major portion of 160-ton load handled by two 15-hp. compressors, thanks to ice storage system.



TWO Baker compressors are cross-connected so that after ice bank has been built up only one machine operates as needed.

set this stored-up heat," the brochure emphasizes.

"Secondly, to offset this stored-up heat and bring down to the desired temperature, a high total tonnage is required, but the actual monthly operating hours are low.

"Third, church installations should have, for economy, a system that allows individual areas to be cooled simultaneously, or independently of the rest of the church building.

"Fourth, a conventional commercial installation, because of its many operating hours, can guar-

antee the electrical company enough use of its services to make it profitable for the power company to install additional transformers and other equipment. A church with the same size conventional system would have to pay the same rate although its equipment is used only a few hours a month.

"This is one of the most important points of the Tresco Latent Power System since it does not require expensive additional electrical service," states the brochure.

(Concluded on next page)



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March 21

This is the much-in-demand annual feature of AIR CONDITIONING & REFRIGERATION NEWS. This issue will be read, studied, and saved by most of the 19,500 paid subscribers. Packed with information, it will be of lasting value to the men who will sell and service your air conditioning during the coming season.

Here's an opportunity to supplement your company's free specifications listing . . . to tell and show your own sales story . . . with a power-packed, impressive, dominating advertisement to sell all the advantages of your air conditioners.

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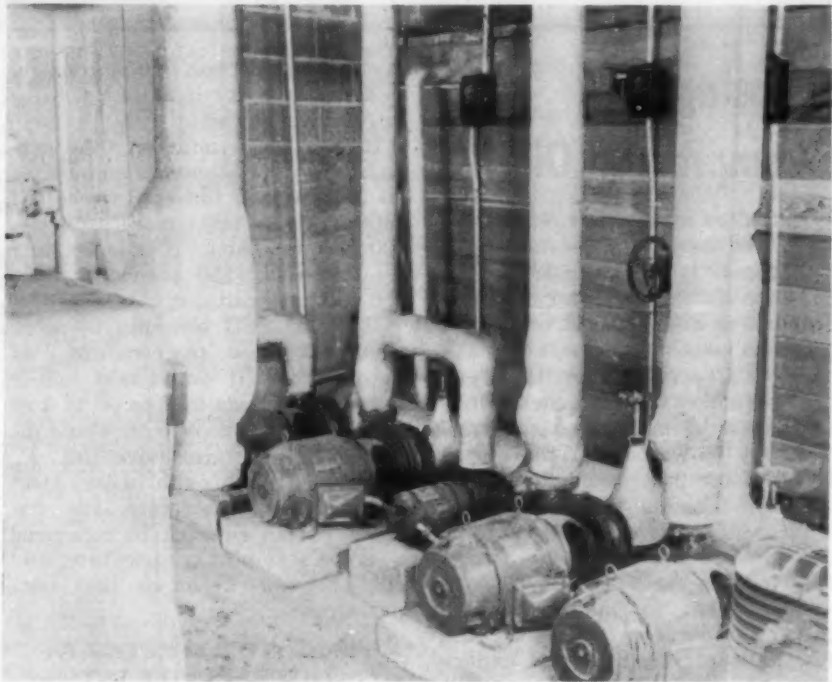
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AIR CONDITIONING



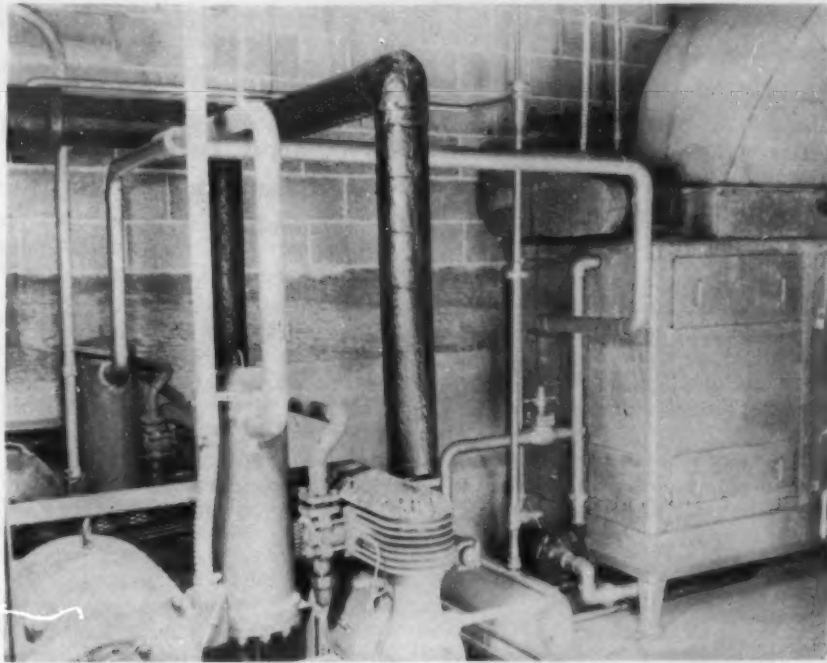
FIVE pumps circulate chilled water from ice storage tank (at right) or hot water from boiler (left).

(Concluded from preceding page)

Incidentally, Angus comments that this brochure is the "fifth that we have sent out so you can see we have considerable invest-

ment in even getting into this church deal."

The fifth brochure, he said, "cost us more than \$600 for setting up and for 2,000 copies." Mailing, fol-



EVAPORATIVE condenser (right) in machinery room minimizes water requirements.

low-up, etc., meant an additional investment.

The aforementioned explanation of the advantages of "latent power" air conditioning takes up only one section of the brochure, which describes in considerable detail the Grace Temple church installation and carefully diagrams and explains how such a system works.

This church, the brochure explains, "requires 160 tons of cooling on at one time, when the entire church is air conditioned. A conventional system would require 160 hp. of compressors running before and during the time cooling is desired.

Two 15-Hp. Compressors Meet 160-Ton Need

"The Treco Latent Power System, however, meets the same tonnage and comfort requirements with only two 15-hp. compressors, and has the maximum capacity stored at all times for immediate use.

"Also," it is emphasized, "cooling comfort is guaranteed since the compressors are not needed during peak loads, whereas cooling comfort of the conventional system relies on the compressors not failing."

Compressors used for this installation are Baker machines, cross-connected.

Other equipment includes a Baker Recold evaporative condenser, a Mueller boiler (1,638,000 B.t.u. input), five Bell & Gossett pumps (two 5 hp. and one each of 3 hp., 1 hp., and 3/4 hp.), a Baker Recold 18-ton multi-zone air conditioner, two 9-ton Baker Recold units, two 13-ton Baker Recold units, 42 McQuay ceiling and console units adding up to approximately 95 tons capacity, and existing air conditioning units in the church auditorium representing 40 tons.

Four Large Areas Served By System

Among the areas served by the system are the large auditorium, first floor classrooms, nursery, and pastor's study.

The five pumps, which circulate 40° water from the latent power storage unit where ice banks are built up, are hooked up as follows:

There is one each for the auditorium, fellowship hall, the original educational building, and the new educational building. The fifth serves the nursery, pastor's study, and the general offices, since these areas are used daily, Angus explains.

Only Areas In Use Need To Be Cooled

"Each pump is controlled by a wall-type switch, located in the area the pump serves," he adds. "For example, a young couples' class has a dinner in the fellowship hall. Two switches are flicked on, one for the fellowship hall and the other one for the nursery,

therefore comfortably serving both parents and children independently of the other areas."

Although the total load on the system at one time amounts to 160 tons, the brochure points out that the Grace Temple church system has "enough power to equal 564 tons of refrigeration."

The explanation is that at the beginning of church services, the latent storage unit would have built up a bank of 47,000 lbs. of ice. Melted over a period of 24 hours, this would equal 23.5 tons,

but if this amount were melted in one hour, the cooling effect would be equivalent to 564 tons.

This installation has won praise from the pastor of the church, Buel R. Crouch, whose letter of commendation is reproduced in the brochure. It says, in part:

"We find that it is very convenient to be able to cool one room, or any particular portion of our building without the expense of operating the entire system. During the extreme hot weather we have been able to keep our offices very comfortable with a minimum of expense.

"The air conditioning has made it possible for us to continue using our dining room with increased attendance during the hot summer months. Our mid-week prayer services have also been the best in the history of the church.

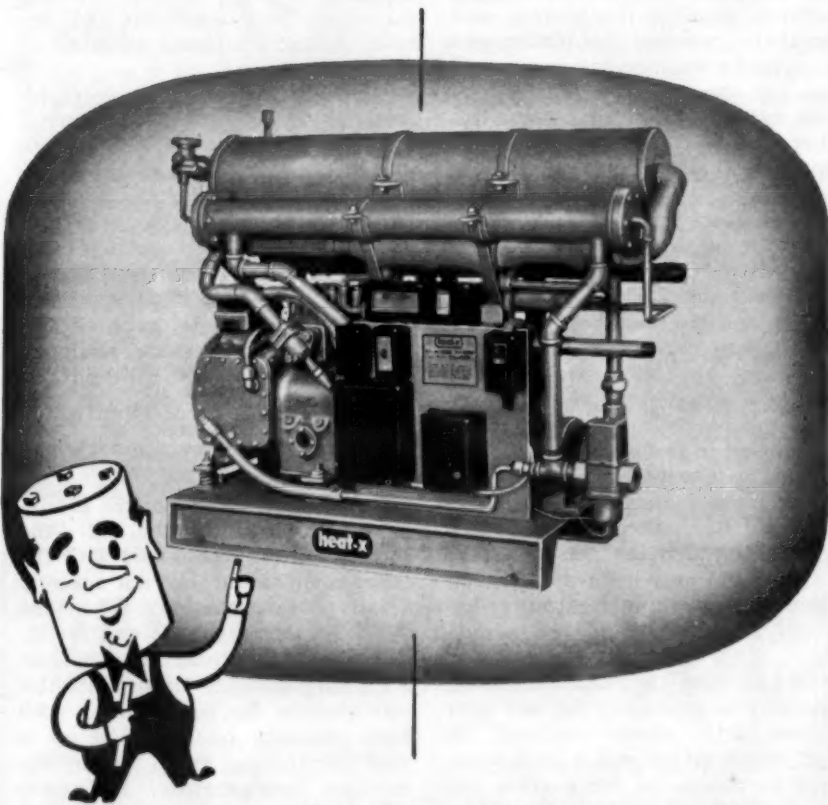
"We sincerely believe that the money we have spent for air conditioning is paying off in increased attendance, and we are happy that our equipment is designed for both winter and summer."

There are indications that electric power companies in the area are quite interested in ice storage air conditioning systems such as employed in these church installations.

The more or less round-the-clock operating characteristic of such systems relieves the utility of the high peaks and sudden, sharp drop-offs of demand encountered with conventional systems, according to some sources.

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These Drayer-Hanson HH Series year-round air conditioning units—so often architect specified—give you:

Rugged construction! Frame electrically welded
Superior performance! Ample prime and secondary coil surface
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... but there is more to it than that!

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*Architect: Welton Becket and Associates, Los Angeles.
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Walters Heads Houston General Controls Office

GLENDAL, Calif. — General Controls Co. has named W. K. Walters as regional manager of the company's branch office in Houston, Texas, it was announced recently by J. F. Ray, vice president in charge of sales.

Walters attended the University of Houston where he majored in electrical engineering.



W. K. Walters

Harris Supply Moves Lansing Store

GRAND RAPIDS, Mich.—Harris Supply Co., refrigeration equipment wholesaler, has announced that it recently moved its Lansing store to a more convenient location at 511 E. Grand River Ave. in that city.

"This store is now more centrally located and has ample parking and loading facilities in addition to more floor space for our stock and displays," said Ila Harris Unseld, general manager of the firm.

"The store is set up on the self-service principle and the floor arrangement of the present building

has allowed us to place our shelving units to greater advantage." "Clint" Horning is manager of the branch.

Mann Supply To Handle Frigid Igloo Products In Metropolitan N. Y.

YONKERS, N. Y.—Appointment of Mann Refrigeration Supply Co. in New York City as exclusive distributor of Frigid Igloo equipment in the greater metropolitan New York area including Westchester and Fairfield counties was announced recently by S. James Krakow, executive vice president of Frigid Igloo Mfg. Corp. here.

Refrigeration Problems And Their Solution

By Paul Reed

For Service and Installation Engineers



Paul Reed

Choosing the Compressor Oil (2)

As stated in the previous installment, the best oil to be used in a compressor is the one specified by the manufacturer of the compressor; but as also brought out in the previous installment, a service engineer who services more than one or two makes of equipment finds that it is a matter of practical necessity to stock a half-dozen types of compressor oils and service all makes out of that stock.

It is therefore essential that the oils in that limited stock be carefully chosen, both as to types and as to quality. The man in the field has no laboratory facilities, and few have the training and experience to enable them to test the various brands and types of oils on the market, so the service engineer must depend on the refiners' specifications on their oils in choosing the proper oils for his stock.

But he must understand what those specifications mean, and what bearing they have on the choice of oils he must make for the various types of compressors, the refrigerants used, and the temperatures maintained by the refrigerating systems. The following is an explanation of the meaning of the terms used in oil specifications.

WHAT AN OIL MUST DO

There are two main purposes of a lubricating oil:

1. It must form and maintain a film between the two frictional surfaces, such as the bearing and the shaft, between the piston and the cylinder wall, or between a seal nose and the seal ring. The metals must not bear and rub on one another directly, but on the oil that separates them. Therefore, it must spread well; it must be tough, and it must stay that way under the normal conditions that may have their effect on the oil.

2. Heat develops even between the oil and the metal surfaces, so the oil must carry that heat away. Therefore, the oil must circulate, so that it can carry the heat away from the bearing and to the main body of oil in the crankcase, where it can be dissipated through the walls of the compressor. If the oil gets too hot, it cannot maintain the oil film between the frictional surface, and may in fact be broken down and lose its lubricating value.

VISCOSITY

Of all the oil characteristics, viscosity is probably the one best known to the service engineer. In fact, there is too much of a tendency to choose oil for a given job on the basis of its viscosity alone. Viscosity is important, but it is no more important than several other oil characteristics that are less known and often entirely disregarded.

Viscosity is the "body" or "oiliness" of an oil; perhaps we could say that it indicates the "heaviness" or "stiffness" of the oil. Viscosity is the measure of how well the oil spreads over the frictional surfaces, and maintains the oil film between them.

Viscosity is measured in Seconds Saybolt Universal (SSU), by a method named after a man named Saybolt. The oil to be tested is put in a small vessel and kept at 100° F. (37.8° C.). From the bottom of this vessel, there is a small tube of a certain length and inside diameter that controls the rate at which the oil can flow out of the vessel. The oil is caught in a cup, and the number of seconds that it

takes for a certain amount of oil to flow into this cup is its Viscosity in Seconds Saybolt.

If it takes 5 minutes (300 seconds) for the standard amount of oil to flow into the cup, we call it "300 viscosity oil"—more properly, 300 SSU viscosity. If it takes only 2½ minutes (150 seconds), it is 150 SSU viscosity, etc.

If a 300 SSU viscosity oil were measured at a temperature less than 100° F., it would take longer than 300 seconds for the oil to flow through the tube, for it would be thicker. If it were above 100° F., it would flow through in less than 300 seconds. Therefore, the viscosity of the oil must be measured at some standard temperature, and 100° F. was chosen as that temperature.

VISCOSITY AFFECTED BY THE REFRIGERANT

Some refrigerants, such as most of the "Freons" and "Genetrons" (except "Freon-13," "Freon-22," and "Genetron 141"), methyl chloride, propane, isobutane, ethane, Carrene-7, and methylene chloride (Carrene-1), mix very readily with compressor oil. These are called "oil-miscible" refrigerants.

When the compressor oil has some of one of these oil-miscible refrigerants in it, it is "cut" or thinned, much the same as if gasoline or naphtha were mixed with the oil. Therefore, an oil to be used in a compressor for one of these oil-miscible refrigerants must have a high viscosity to start with, so that, even when thinned by the refrigerant, it will still have a high enough viscosity to maintain a tough oil film between the shaft and bearings, and between other frictional surfaces in the compressor.

For these oil-miscible refrigerants, we should use an oil having a fairly high viscosity of 300 to 325 SSU. For rotaries, which depend on an oil film to seal between the ends of the rotor and the cylinder, the manufacturer may specify an oil of even higher viscosity—up to 400 to 500 SSU.

Other refrigerants, such as ammonia, carbon dioxide, sulphur dioxide, "Freon-13," "Freon-22," and "Genetron-141," do not mix readily with compressor oil. These refrigerants are known as non-miscible or immiscible. When the oil is agitated (as when the crankshaft is churning the oil) the refrigerant may be mixed with the oil to some extent, but not actually dissolved into the oil. When the agitation stops, the oil and refrigerant separate from one another.

Compressors for these immiscible refrigerants do not require such high viscosity oils, for the oil is "cut" or thinned much less by the miscible refrigerants. For compressors for these immiscible refrigerants, an oil having a viscosity of about 150 SSU is usually used.

Oils having viscosities of about 150 SSU are also used a great deal for ultra-low temperature application of below about -20° F., even with the refrigerants that are miscible with the oil; for at extremely low temperatures, a high viscosity oil, although thinned by the refrigerant, is still so "stiff" that it does not flow readily through the evaporator.

As far as viscosity alone is concerned, most installations can be taken care of by either a 300 to 325 SSU oil or a 150 SSU oil. So the service engineer does not ordinarily need to stock more than these two viscosity oils.

COLOR OF THE OIL

Although, in itself, the color of an oil means nothing to the com-

(Continued on next page)

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Production of over 70 million controls is an amazing record in itself. But Ranco's real record is in the performance of those controls . . . performance that's bound to make them more popular by far than any other. Try Ranco and see for yourself. You'll find a Ranco Control for every job . . . a Control that cuts installation time, builds your service reputation, earns you extra profits.

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The seal is made in such a way that it does not change the diameter of the tube. This makes it possible to pass the tube through any opening large enough for the tube itself. Economical tube sizes range from 1/8" to 3/4" O. D.

In addition the DRYSEAL carton, has been attractively designed for easy identification in stock. It contains one 50-foot coil of DRYSEAL . . . is easier to handle, light weight, economical and is sturdily made to assure protection of the tube.

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Compressor Oil--

(Continued from preceding page) pressor, nevertheless, the color of the oil is an important consideration when selecting a compressor oil.

A water-white oil (without color) is an oil that has been so highly refined that all of the "unsaturated hydrocarbons" have been removed, for it is these unsaturated hydrocarbons that give the oil its color. An oil that has only a slight tint has had most of the unsaturated hydrocarbons removed, etc.

The presence of unsaturated hydrocarbons in the oil improves its lubricating value over a water-white oil. Therefore, some color is desirable in an oil, as far as the lubricating quality of the oil is concerned.

On the other hand, it is these unsaturated hydrocarbons that are such powerful influences in causing copper plating in compressors used with the halogenated hydrocarbon refrigerants, such as methyl chloride, the "Freons," and the "Genetrons," so the oil used with these refrigerants should contain the very minimum of the unsaturated hydrocarbons.

Some of the halogenated hydrocarbon refrigerants are more susceptible to copper plating than others. Methyl chloride is very susceptible to copper plating, and it is the writer's belief that the oil for methyl chloride compressors should be water white. Such oil will give the maximum assurance against copper plating; and the successful operation of many thousands of methyl chloride compres-

sors using water-white oil, over a period of many years, attests that it has plenty of lubricating value, despite the lack of the unsaturated hydrocarbons.

The "Freons" and "Genetrons" are less susceptible, but not immune to copper plating, so the oil for their compressors may contain some unsaturated hydrocarbons; that is, it is allowable for oils used with these refrigerants to have a slight amber tint. Such oils, being less highly refined than a water-white oil, have the advantage of a lower cost also.

Ammonia oil can have a decided color, but should still be a well-refined, clear oil, indicating greater stability and less tendency to form sludges than the dark oils.

Thus, the oils in the service engineer's stock listed in last week's issue should be almost water-white but with a slight amber tint. If the service engineer does a great deal of ammonia work he may wish to also stock an ammonia oil, and if he does a very considerable amount of methyl chloride work, he will find it desirable to stock a 300 to 325 SSU viscosity water-white oil, especially if he has been having copper plating trouble.

(To Be Continued)

Rebel To Handle Unarco Air Conditioner Exports

CHICAGO—Albert Rebel has been appointed manager of a newly-organized Export Div. which will handle the Union Asbestos & Rubber Co.'s air conditioning products, it was announced recently by Chester S. Stackpole, general sales manager of the Heating and Cooling Div.

The new division, Stackpole said, will maintain offices at 354 S. Spring St., Los Angeles.

William G. Huston, formerly head of his own organization in the Hawaiian Islands, Stackpole said, will be Rebel's assistant.

Rebel, who spent 23 years as director of the world Export Div. of the Super-Cold Corp., also headed all operations of Super-Cold's European factories in England, Sweden, Holland, and Germany, Stackpole said.

The Export Div.'s Los Angeles office, Stackpole said, has been completely staffed with its own corps of interpreters and Unarco will launch an immediate sales campaign in Latin and South America.

Plans have been completed, he added, to make Unarco products available, beginning in March, in South Africa, the Belgian Congo, India, and Europe. In addition, a selling campaign will be launched in Hawaii and the Far East.

Kramer Sales Conference Hears of New Design, Engineering Advancements

TRENTON, N. J.—Advancements in engineering and design of new and improved Kramer equipment such as "Thermobank" and the waterless "Unicon" were highlighted at a two-day sales conference at the Kramer Trenton Co. plant here recently, it was announced by the Kramer management.

Sales representatives from territories throughout the United States were welcomed to the parley by Israel Kramer, co-principal in the Kramer firm.

Every Kramer department attended the conference which featured an intensive series of conference-style meetings under the direction of S. Charles Segal, Kramer's general sales manager. The factory sessions also included a complete study tour of plant facilities and the Kramer laboratory.

Receiving major attention at the sessions were production plans for 1955 and sales, advertising, and promotion programs for the coming year.

The first day's schedule included a message from Kramer co-principal Nathan Kramer and was followed by a group dinner. The second day's schedule saw the end of the conference with a detailed

analysis and evaluation of Kramer's field sales program.

Sales representatives participating in the conference included: I. H. Cohler, G. W. Chilson, Robert M. Nelson, M. E. Corbin, Allen C. Dean, Leo J. Freitas, Frank F. Kennedy, W. D. McDaniels, Thomas H. Hart, Vernon Sisson, J. Burnett, David Dodds, R. B. Holland, Harry Klingler, Thomas Manning, Eddy J. Miller, Art J. Nelson, Leon Bush, Art A. Reed, John Harkins, Frank Obert, William Donovan, H. P. Peterson, A. Ballard, and Mason Emanuels.

Globetrotters vs. Generals

Amana To Sponsor Special Basketball Game Mar. 12

AMANA, Iowa—Amana Refrigeration, Inc., has announced that it will co-sponsor a nationwide CBS telecast of a special basketball game Saturday, March 12, between the world-famous Harlem Globetrotters and the rival Washington Generals.

Proceeds of the game will go to the U. S. Olympic Games Committee, to support the U. S. team in the 1956 Olympics.

The game, which marks the first television performance for both the Globetrotters and the Generals, reportedly will be seen by the largest audience ever to watch a basketball game on TV. It will be televised at 2 p.m. (CST) from

the Great Lakes Naval Training Station in Illinois.

The special game will follow the March 5 wind-up of CBS's Big Ten basketball telecasts, for which Amana is a co-sponsor.

Frozen Food Study--

(Concluded from Page 1, Col. 4)

wives should be told on every package of frozen food that it's not safe to dilly-dally about getting it home, he said probably not more than an hour or two should be allowed to elapse between taking a frozen food package from the store freezer and getting it into the home freezer or refrigerator.

Taylor said housewives who lack freezers or refrigerators with freezing compartments also should be warned that they'd better not lay in more than a two or three days' supply of frozen food at a time. Refrigerator temperatures just aren't low enough to keep spoilage from setting in, he pointed out.

The Florida official further contended frozen food labels should be more emphatic about the need for following preparation instructions strictly.

He noted that the manufacturer of a frozen food product which recently caused illness in south Florida maintained that if instructions for its heating had been followed, no food poisoning would have resulted because any bacteria present would have been killed.

Filtrine Since 1901

Jank Type

WATER COOLERS

- ◆ Extra-large storage
- ◆ Safety from freeze-up
- ◆ Fast hourly recovery
- ◆ 20-year life construction

Capacities: 5 to 500 g.p.h.
Storage: 2 to 240 gals.

Water coolers for all uses
factory-packaged with your
condensing unit. Write for
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FILTRINE MFG. COMPANY
53 LEXINGTON AVE. • B'KLYN 38, N. Y.

It COMPLETES
our ice making
family!

Carrier

FLAKEMASTER



BUY DIRECT---SAVE

If you are selling home freezers and would like your own private label, we can quote you direct prices on single units that defy comparison.

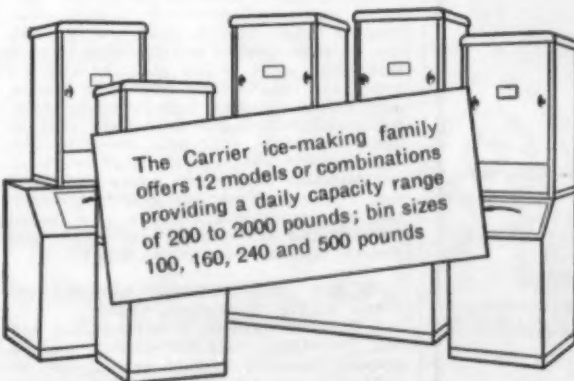
We are private label brokers of nationally-advertised merchandise and sell thousands of freezers every year to dealers who prefer to save the difference in cost between their own private label and the high distributor or dealer prices paid just for the brand name. Write for specification sheets, pictures and prices, and compare this familiar merchandise with your present inventory, dollar for dollar.

TRI-STATE DISTRIBUTORS
BOX 836—Lima, Ohio

The Carrier FLAKEMASTER—the newest member of Carrier's ice-making family—even surpasses the cube-and-crushed models in ice-cost savings. Only 6¢ worth of water and electricity, at average rates, will produce 100 pounds of ice. Imagine how quickly a FLAKEMASTER pays for itself!

And just look at these other FLAKEMASTER sales features:

- Hard, dry, easily handled flakes
- Simple, quiet operation with few moving parts
- Gravity delivery of ice into bin
- Automatic operation that keeps bin always full
- And many other features that add up to long years of efficient operation



The Carrier ice-making family offers 12 models or combinations providing a daily capacity range of 200 to 2000 pounds; bin sizes 100, 160, 240 and 500 pounds

Water-cooled models make 1000 or 2000 pounds of flakes per day. Air-cooled models make 1000 pounds per day.

The Carrier FLAKEMASTER is a dealer's sales-making delight. It adds to his list of prospects such quantity ice users as: supermarkets and fish, poultry and fresh-produce markets; fish, poultry and meat packing houses; dairies, restaurants, hospitals, hotels, bars, clubs and numerous other large-scale users of flaked ice.

Now—more reasons than ever before to be a Carrier ice machine dealer: choice of 12 models or combinations to assure matching every ice user's needs exactly, realistic pricing policy, liberal dealer and customer financing plans, and full coverage promotion help. They all combine to make big and continuing profits for the alert dealer.

Mail the coupon below. Find out for yourself. Do it now.

Carrier air conditioning refrigeration

CARRIER CORPORATION, 310 S. Geddes St., Syracuse, New York

Tell me the complete story about Carrier's complete ice-making family. Also tell me how I can get in touch with the nearest Carrier distributor.

Name _____

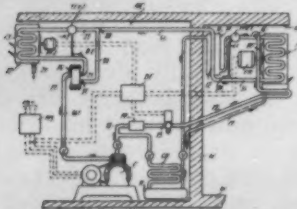
Business _____

Address _____

City _____ Zone _____ State _____

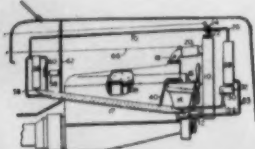
PATENTS Weeks of Nov. 23 & 30

2,694,904. DEFROSTING ARRANGEMENT FOR REFRIGERATION SYSTEMS. Harold T. Lange, Webster Groves, Mo., and Charles C. Grote, Dobbs Ferry, N. Y., assignors to Sporlan Valve Co., Inc., St. Louis, Mo., a corporation of Missouri. Application Oct. 12, 1951, Serial No. 251,040. 4 Claims. (Cl. 62-3.)



1. In a refrigerating system including a compressor, a condenser and an evaporator together with means for driving the compressor, and tubing interconnecting the said units in a closed system, a hot gas conduit for defrosting purposes connected directly from the compressor to the evaporator inlet, that portion of the tubing between the evaporator and compressor including a first branch, a re-evaporator in said first branch, a thermostatic expansion valve controlling admission of flow to said first branch and responsive to thermal conditions beyond the re-evaporator, a second or by-pass branch connected into the suction line ahead of said thermostatic expansion valve and a bypass valve of thermal responsive character connected to both of said branches and selectively controlling flow therefrom through a remainder of the suction line to the compressor, said bypass valve including a fluid-charged valve motor unit located substantially directly in the line of flow from either of said branches through said remainder of the suction line to the compressor, said bypass valve being actuated by said motor unit in response to thermal conditions and pressure differentials in the first branch beyond the re-evaporator and in the bypass branch.

2,694,905. AIR CONDITIONER. Don Williams, Jr., Albuquerque, N. M. Application May 11, 1951, Serial No. 225,842. 5 Claims. (Cl. 62-5.)

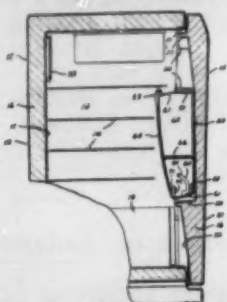


1. A low pressure refrigerator system of the gas absorption type for installation in a motor vehicle having an internal combustion engine provided with the standard radiator and a cooling circuit including a pump circulating water through the water jacket of said engine and said radiator, said system including a sealed refrigerant circuit, a sealed carrier gas circuit and a water circuit, said water circuit being comprised of the cooling water circuit of said engine, the radiator of said engine forming an analyzer for the water and refrigerant circuits to separate said water and refrigerant fluids after they have been combined for heating of the mixed fluids in the cooling jacket of said engine, and a manually adjustable thermostatically controlled valve interposed in the cooling circuit of said engine.

2,694,906. REFRIGERATING APPARATUS HAVING A HYDRATOR RECEPTACLE. Nolan A. Didion, Detroit, Mich., assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Dec. 5, 1951, Serial No. 259,937. 6 Claims. (Cl. 62-83.)

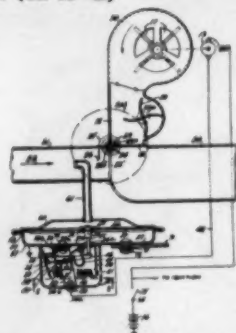
1. In a household refrigerator of the

type having walls defining a food storage compartment accessible through an opening in the front wall thereof, a door pivotally secured to the cabinet adjacent said compartment normally closing its opening,



said door being constructed and formed to define a recess in its inner face, a refrigerating system associated with said refrigerator, said system including a cooling element disposed in said compartment and a refrigerant translating device, said device maintaining said cooling element below 32° F. for chilling and creating convection currents of air in said compartment and in the recessed portion of said door, a hydrator receptacle having at least a portion thereof disposed in the recess of said door and exposed to said air currents, said receptacle being provided with an access opening and a member carried thereby and movable relative thereto for substantially closing said receptacle access opening, means for pivotally mounting said receptacle upon said compartment door with its closure member normally adjacent to and extending in substantially parallel relation with the inner face of said door at said recessed portion thereof, and said receptacle being swingable about its pivotal mounting, when said door is opened, into a substantially horizontal position to render its closure member readily accessible for movement.

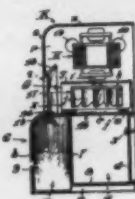
2,694,970. AIR CIRCULATING APPARATUS. Paul L. Schneider, Anderson, Ind., assignor to General Motors Corp., Detroit, Mich., a corporation of Delaware. Application Dec. 1, 1949, Serial No. 130,461. 2 Claims. (Cl. 95-2.)



1. An air circulating apparatus comprising in combination, a pair of ducts joined at one end thereof to form a single passage, a blower connected to one of said ducts, the other of said ducts being subjected to flow of air in response to forward movement thereof, a valve disposed adjacent the junction of said ducts and normally biased to close said first duct and operable under predetermined conditions to open the first duct and to close the second of said ducts, a control device responsive to air flow in the second duct adapted to control operation of the blower and normally biased so that said blower is operative, means in said second duct responsive to predetermined air flow therein for operating said control device to render the blower inoperative

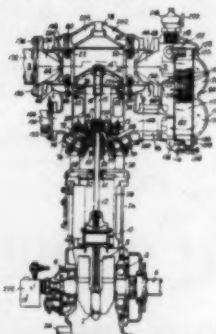
upon predetermined air flow within said second duct, and means in the first duct responsive to air flow caused by said blower in said first duct for positively opening said valve in the first duct and causing said valve to close said second duct.

2,694,971. AIR CIRCULATOR. John S. Andrews, Los Angeles, Calif. Application Sept. 11, 1950, Serial No. 194,224. 4 Claims. (Cl. 98-38.)



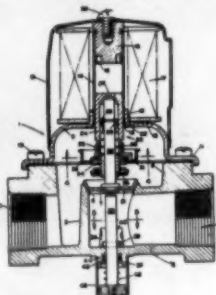
1. An air circulator comprising an elongated hood adapted to be mounted on a vertical wall, said hood having top, front, back and end walls and open throughout on its under side, means for fastening said hood on a wall in a horizontally extending position with its open side presented downwardly, an air intake passage in said hood opening downwardly to the open side of said hood throughout the length thereof, said top wall having a slot mediate the length thereof opening to said passage, a blower on said hood having a discharge outlet arranged to direct a stream of air outwardly over and adjacent said slot to induce air from said intake passage through said slot, and a passage in said hood separated from said air intake passage and from the open under side of said hood and having ends opening to the interior of the hood adjacent the end walls thereof for directing air to said blower from the interior of the hood.

2,695,132. COMPRESSOR. Win W. Paget, Michigan City, Ind., assignor to Joy Mfg. Co., Pittsburgh, Pa., a corporation of Pennsylvania. Application June 25, 1948, Serial No. 35,091. 4 Claims. (Cl. 230-183.)



2. In a multi-stage compressor comprising a plurality of single-acting piston-and-cylinder compression stages each stage having intake and discharge passages, a large diameter cylinder forming a first stage compression chamber, a small diameter cylinder forming a second stage compression chamber, the small cylinder having one end adjacent an end of the large cylinder, a closely fitting piston in each cylinder, the pistons being connected for simultaneous reciprocation in their respective cylinders, the two cylinders connected with each other at their adjacent ends to form with the pistons an intermediate chamber, the intermediate chamber having a constantly varying volume and receiving only fluid that leaks past the pistons, an element having passage means connecting the intermediate chamber exclusively with the first stage intake passage, and a valve in the passage means operable to a fully closed position to prevent fluid flow in the passage means to the intermediate chamber and operable to a fully open position to freely connect the intermediate chamber with the first stage intake passage.

2,695,154. SOLENOID VALVE. Earnest J. Dillman, Detroit, Mich., assignor to Detroit Controls Corp., a corporation of Michigan. Application Oct. 27, 1950, Serial No. 192,483. 10 Claims. (Cl. 251-77.)

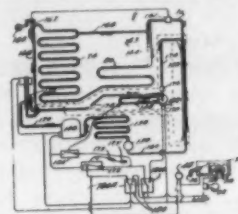


1. In a solenoid operated valve, a valve casing having an inlet and an outlet and a top opening, an internal partition in said casing between said inlet and outlet and having a valve port therein facing said top opening, a cover for said casing closing said top opening and having an aperture with an upwardly projecting sleeve overlying said valve port, a guide tube having its lower end secured in said cover sleeve, a solenoid coil surrounding said guide tube and carried by said cover, a plug closure member of magnetic material secured in and closing the upper end of said guide tube and carrying a non-magnetic shading coil therein, a valve member closing said valve port, a solenoid plunger reciprocally movable in said guide tube and connected to said valve member for moving the same, a stop member on said plunger and operable to stop said plunger in an up position with its upper end spaced from said plug closure member, an inverted dished closure member reciprocally carried by said plunger and engageable with said cover to seal said guide tube from the material passing through said valve while the valve port is open, and a coil spring surrounding and compressed between said dished member and said plunger and urging said dished member toward said cover.

2,695,502. ICE-MAKING APPARATUS. Glenn Muffy, Springfield, Ohio.

1. In a refrigerator, a refrigerating system for cooling said refrigerator, an evaporator included in said system and arranged to cool air within said refrigerator,

a portion of said evaporator near its inlet end being arranged for making ice, a thermostatically controlled expansion



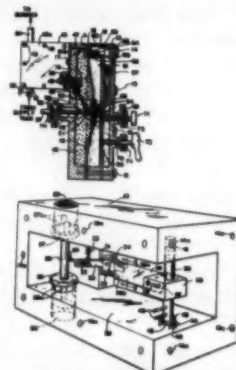
valve connected in said system to control the flow of liquid refrigerant to said evaporator, a thermally affected element of said expansion valve being exposed to said air and mainly responsive to temperature changes thereof, and control means responsive to the increase in volume of a body of said ice to control the removal of refrigerant vapor from said evaporator, said expansion valve and control means coacting to cause said evaporator to present more cooled area to said air and be actively cooled by removal of vapor therefrom for longer periods of time when said air temperature is higher.

2,695,514. DEW POINT INDICATOR. William E. Brown, Pewaukee, Wis., assignor to Cutler-Hammer, Inc., Milwaukee.



7. For testing a gas for determination of its moisture condition, the combination with a first thermally conductive member adapted to be constantly chilled, of a second thermally conductive member having a specular surface exposed to the gas to be tested, adjustable coupling means between said members to vary the rate of heat transfer from said second member to said first member to effect condensation of the moisture in the test gas on said specular surface, said coupling means affording maintenance of said rate of heat transfer constant irrespective of any change in relative temperature of said first and second thermally conductive members.

2,695,765. SNAP-ACTING FLUID METERING VALVE DEVICE. Joseph T. Abdo, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

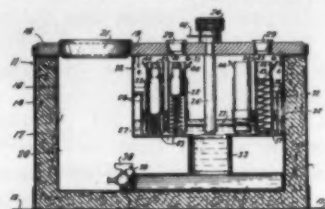


9. A device for metering fluid comprising an accumulator having a movable wall, a control valve operable by said movable wall, an inlet and an outlet for said accumulator alternately opened and closed by said control valve, means biasing said control valve in a direction to open said inlet, means biasing said movable wall in a direction to expel fluid from said accumulator when said outlet is open and said inlet is closed but operable under inlet pressure against said bias to permit said accumulator to fill when the outlet is closed and the inlet is opened.

2,695,729. DISPENSING REFRIGERATOR FOR ARTIFICIAL INSEMINATION. Mary M. Kornish, Elgin, Ill., assignor to The Curtiss Candy Co., Chicago, Ill.

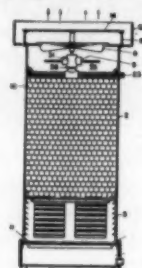
1. In a dispensing container having an insulated, watertight shell and a rack adapted to hold the units to be dispensed mounted therein, the combination of a temperature modulating unit positioned

beneath said rack comprising a hollow container adapted to position a column of water beneath said rack, a space surrounding said hollow container adapted to contain ice; said rack including metallic tubu-



lar members surrounding said units and extending therebelow to a position within said temperature modulating unit at a level below a level at which the column of water may be maintained.

2,695,773. COOLING TOWER. William L. McGrath, Syracuse, N. Y., assignor to Carrier Corp., Syracuse, N. Y.



1. A lattice-work deck for a cooling tower comprising a series of rectangular strips of asphalt impregnated organic fiber material extending in a first direction and a second series of similar rectangular strips of impregnated organic fiber material extending at an angle to strips in the first series and frictionally interlocked therewith by means of spaced slots extending from longitudinal edges of the strips, the slot at one end of each strip being spaced a greater distance from that end of the strip than the distance between the slot at the opposite end of the strip and the opposite end of the strip, the deck being adapted to be disposed with the edges of the strips opposed to the air passing through the cooling tower.

(To Be Continued)

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"In your fine newspaper, I make it a point to read and study Paul Reed's articles first. Service articles are most important in my line of work, and I also have bought all Paul Reed's technical manuals in the J series—REFRIGERATION PROBLEMS & THEIR SOLUTION, advertised in the NEWS.

"I also get a kick out of 'Inside Dope' by George Taubeneck, and 'What's New' column is most interesting to me."

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2-25-55

Government Contracts

PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing officer under which the purchase is listed in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date.

DEPARTMENT OF DEFENSE

Invitations for Bids numbers will be followed by the letter "B." Requests for proposals or quotations will be indicated in this column by the letter "Q," or, if numbered, the number will be followed by the letter "Q."

Description	Quantity	Invitation No.	Opening Date
Commander, Sacramento Air Materiel Area, McClellan Air Force Base, California	Job	85-B	2 Mar 55
Installation of Gov't furnished evaporative coolers on various bldgs. at McClellan Air Force Base, McClellan, Calif.			
Officer in Charge, Navy Purchasing Office, Washington, D. C.	25	1FB-600-827-55	16 Mar 55
Mobile air conditioner, shore based, model No. NR-1 specifications Mil-A-18169(AER) air a-plane, corp dwgs AX-361-1 through AX-361-134.			

Headquarters, Fort McClellan, Office of the Purchasing and Contracting Officer, Fort McClellan, Alabama

Description	Quantity	Invitation No.	Opening Date
Installation of 20 ton capacity central air conditioning and one 3 ton AC unit complete in theater No. 1 building No. 161 Fort McClellan, Alabama.	Job	01-088-55-13B	28 Feb 55

Galveston District, Corps of Engineers, P.O. Box 1229, Galveston, Texas

Description	Quantity	Invitation No.	Opening Date
Condenser water line for the dehumidification system Michoud Ordnance Plant, New Orleans, La., work to consist principally of the following: furnish and install 200 ft. of 48-in. steel pipe and construction of a new concrete cooling tower sump pit on an existing cooling tower, remove 200 ft. of existing 42-in. concrete pipe replace existing 14-in. swing check valves on 66 existing centrifugal pumps w/non salam type check valves, remove existing suction manifold piping on 6 existing centrifugal pumps and replace w/14-in. pong radius elbows and 14-in. by 20-in. concentric reducers.	Job	ENG-41-243-55-43-B	10 Mar 55

Purchasing and Contracting Office, Fort Jackson, S. C.

Description	Quantity	Invitation No.	Opening Date
Air conditioning of hospital buildings at Fort Jackson, S. C.	Job	FJGDD-PC-38-042-55-24-B	11 Mar 55

Purchasing and Contracting Office, Fort Eustis, Virginia

Description	Quantity	Invitation No.	Opening Date
Installation of Air Conditioning in the Theater of Building 2850.	Job	(44-019-55-129B)	2 Mar 55
Seven and one half ton air conditioning units.	4 ea.		
Two and one half ton air conditioning units.	1 ea.		
Cooling tower complete with fan-pump and necessary plumbing and foundation sound dampening enclosures, ductwork, etc.	1 ea.		

Chicago Quartermaster Depot, Quartermaster Purchasing Div., Chicago, Illinois

Bid forms now available. Do not request after opening Date.

Description	Quantity	Invitation No.	Opening Date
Refrigerators, household, Feb. Spec. AA-R-211C.	258 ea.	55-298B	1 Mar 55
Left side.	258 ea.		
Right side.	258 ea.		

Commander, Dayton Air Force Depot, Gentile Air Force Station, Dayton, Ohio, Attn: Directorate Procurement and Prod.

Invitations for Bid (B) and Requests for Proposal (Q) are distributed to firms listed in the Air Force Bidders List. These are available with specifications and drawings at the nearest Air Procurement District and Sub-Offices for EXAMINATION ONLY by prospective bidders, pending their inclusion in the Bidders List. While Air Force District and Sub-District do NO purchasing, bidders may apply to the nearest Air Procurement District and Sub-District offices for placement in the Air Force Bidders List; also for procurement assistance and suggestions upon obtaining subcontracts.

Air Procurement District and Sub-Offices are located in the following cities:

Atlanta, Ga.	441 W. Peachtree St., N.W.	Minneapolis, Minn.	920 Second Ave.
Boston 10, Mass.		Minneapolis Sub-Office	
Boston Army Base		New York 3, N. Y.	111 E. 16th St.
Buffalo, N. Y.	1021 Main St.	Newark, N. J.	218 Market St.
Buffalo Sub-Office		Oakland 12, Calif.	1515 Clay St.
Chicago, Ill.	165 North Canal St.	Ogden, Utah	
Cleveland 13, Ohio	1279 W. Third St.	Ogden Air Materiel Area	
Dallas 1, Texas		Hill Air Force Base	
Wilson Bldg., Rm. 338		Ogden Sub-Office	
Dayton, Ohio		Philadelphia, Pa.	1411 Walnut St.
Wright-Patterson Air Force Base, Bldg. 70, Area "C"		Rochester 3, N. Y.	20 Symington Place
Detroit 32, Mich.		St. Louis, Mo.	9th Floor, U.S. Court & Customs House
W. Warren Ave. & Longy Blvd.		1114 Market St.	
Fort Wayne, Ind.		St. Louis, Mo.	8100 W. Florissant Ave.
526 Ewing St.		Southern Ill. Sub-Office	
Fort Wayne Sub-Office		Seattle 14, Wash.	% Boeing Airplane Co.
Hartford, Conn.		Seattle Sub-Office	
500 Capitol Ave.		South Bend, Ind.	521 N. E. 10th St.
Hartford Sub-Office		South Bend Sub-Office	
Indianapolis, Ind.		Syracuse, N. Y.	Federal Bldg., Clinton Sq.
54 Monument Circle		Syracuse Sub-Office	
Johnson City, N. Y.		San Diego 10, Calif.	4325 Pacific Highway
600 Main St.		Tucson, Ariz.	P.O. Box 5555,
Johnson City Sub-Office		Helen St. Annex	
Kansas City, Mo.		Wichita, Kan.	449 N. Oliver St.
1828 Walnut St.		Wichita Sub-Office	
Kansas City Sub-Office			
Los Angeles 15, Calif.			
1206 Maple Ave.			
Milwaukee, Wis.			
770 N. Plankinton Ave.			
Switch, thermostatic spdt.	850 ea.	(2783-Q-PRIME CLASS)	21 Mar 55
AI Research P/N 12212-11.			
Switch, thermostatic spdt.	50 ea.		
at AI Research P/N 12218-3.			
Switch, thermostatic non-pile up type spdt.	50 ea.		
AI Research P/N 12282-6.			
Switch, thermostatic spdt.	850 ea.		
AI Research P/N 12280-4.			
Thermostat A/R Research P/N 12214.	500 ea.		
Purchasing and Contracting Division, Quartermaster Office, Fort Benning, Georgia			
Evaporative condenser.	1 ea.	(09-038-55-74)	1 Mar 55
25-ton capacity for outdoor service.			
No Telegraphic Bids Accepted.			

CONTRACTS AWARDED THROUGH FEB. 18

U. S. Army, 1819 W. Pershing Rd., Chicago 9, Illinois

Dispenser, drinking water, mech. cooled, NEG.-674 ea., \$74,351.—Sunroc Refrigeration Co., Glen Riddle, Pa.

Calif. RSES To Meet In Reno March 4-6

RENO, Nev.—A meeting of the California Association of the Refrigeration Service Engineers Society will be held here March 4-6 with the Reno Chapter as host, it was announced recently.

Advance registration for the meeting is scheduled for Thursday, March 3. Friday's activities will include registration, inspection of old-fashioned cars, and a cocktail hour, get-acquainted party, and dancing.

On the program for Saturday is a "coffee-time bull session"; talks by Raymond I. Smith, Dr. William O'Brien, Huey Schoff, and Mr. Woodworth, general inspector, air conditioning and car lighting, Southern Pacific.

Woodworth will give a brief outline on railroad air conditioning, after which he will discuss steam and vapor as they apply to railroad air conditioning. The presentation then will be continued in the Southern Pacific's air conditioning car, with all types of models being explained.

The car will be brought to Reno especially for the convention, it was pointed out. Alongside this car will be one of the new models of the "Jumbo" mechanical refrigerator cars. Mr. Moore, engineer of car construction, will be on hand to answer questions regarding it.

WANTED NEW SURPLUS UNITS AND COMPRESSORS 1/2 H.P. TO 50 H.P.

Also expansion valves, fittings, belts, controls, motors, other refrigeration parts, for cash!

TRACO INDUSTRIAL CORP.
461 W. 126th St., N.Y.C.
University 5-7700

BUSINESS OPPORTUNITIES

COMMERCIAL REFRIGERATION & air conditioning business, in city of over 25,000, in Colorado. Good franchises available, and plenty of room to expand. Will gross \$50,000 to \$100,000 per year, as small operation. Priced under \$8,000, will finance. Inquire BOX A5178, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

COIN METERS, nationally known brand, model DM-6, double door, 110-v complete with gears. Can be purchased in lots of 10 for only \$5.00 each. These meters cost new \$15.75 and are in perfect operating condition. Collectors and servicemen's keys different. AJAX-BAYSTON CORPORATION, 665 North Berendo, Los Angeles 4, Calif.

TWENTY NEW lights—12" x 56"—% double thermopane glass @ \$15.00 each. Forty-five new lights—12" x 72"—% double thermopane glass @ \$25.00 each. Twenty new lights—18" x 88" x 1 1/4"—four glass thermopane @ \$50.00 each. F.O.B. SERVICE REFRIGERATION COMPANY, 79 East 36th Street, Paterson 4, New Jersey.

ATTENTION SERVICEMEN: Save 25 to 50% on your refrigeration parts. Send for our catalog of values today. Here is only one of our money saving offers. 1 1/2" O.D. copper connections x 1 1/4" overall vibration eliminators, \$4.65 each. Lot of 10, \$40.00 each. WALTER W. STARR REFRIGERATION SUPPLIES, 2833 Lincoln Avenue, Chicago 13, Illinois.

tailed summary in first letter. All replies confidential. BOX A5182, Air Conditioning & Refrigeration News.

ENGINEER WITH good refrigeration background and experience in sheet metal design for assistant chief engineer in midwest plant producing special refrigeration and air conditioning equipment. Man we want may be between thirty and fifty, has responsible position now but may not be satisfied with future prospects. Starting salary \$7500.00 with definite program for advancement. Reply with brief biographical sketch to BOX A5183, Air Conditioning & Refrigeration News.

SALES ENGINEER—As assistant to manager setting up and servicing nationwide distributor organization. Opportunity for advancement. Experience with truck refrigeration equipment helpful but not essential. Considerable traveling involved. Salary open. Expenses. Our employees know of this ad. Write full particulars and salary desired. Interviews at our expense. BOX A5184, Air Conditioning & Refrigeration News.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications \$10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

GRADUATE MECHANICAL engineer, age 37, married and have ten years' refrigeration manufacturing experience, including design, application, and handling customer complaints. Desires to switch to sales work. With this background and a pleasant personality the transition to selling should come readily. If my services are of interest to you write BOX A5178, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

FACTORY PRODUCT manager—Commercial refrigeration and ice making units for large manufacturer. Requires engineer with experience in sales and application of condensing units to refrigeration fixtures and cases. Capable of analyzing product lines and applications. Write BOX A5170, Air Conditioning & Refrigeration News. All replies "confidential."

SALES ENGINEER—Leading manufacturer and supplier of radiators and heat exchange equipment has excellent position for an air conditioning sales engineer of proven ability with wide acquaintance among air conditioning and heating equipment jobbers and manufacturers. If you can lead our market development program write giving full particulars. BOX A5177, Air Conditioning & Refrigeration News.

WANTED—REFRIGERATION mechanic with long experience in installations of market equipment. New York City area—must have car. State experience and salary expected. Address reply to BOX A5181, Air Conditioning & Refrigeration News.

CAN YOU run a service organization? Marvelous opportunity for qualified man to take over present successful maintenance and service organization consisting of 10 men and trucks and build himself a permanent business future with unlimited income. Location is the fast growing Philadelphia and Camden area, with Carrier franchised distributor. Give de-



TWA hostess Marlene Faber presents two tickets for a tour of Europe to John J. Kramer, head of John J. Kramer & Associates, Dearborn, Mich. The trip was first prize in the Union Asbestos & Rubber Co.'s 1954 Heating & Cooling Div. sales contest. Looking on are (l. to r.) Chester S. Stackpole, division general sales manager, and John H. Balch, executive vice president of Unarco.

More Space for Medics Planned In Birmingham

BIRMINGHAM, Ala.—I. B. Armstrong, Jr., local businessman, has proposed construction of an air conditioned 20-story medical arts building in the Medical Center area to place physicians and allied professional persons within reach of the center's facilities.

Preliminary plans for the proposed building have been prepared by Architect Martin J. Lide. Armstrong said the building will be air conditioned throughout with a circulating chilled water system. Each office suite will have individual thermostatic control, according to the plans.

Unarco Representative Wins European Trip

CHICAGO—Two round-trip tickets by air to Rome, Zurich, London, and Paris, first prize in the Union Asbestos & Rubber Co. Heating & Cooling Div.'s 1954 sales contest, were presented to John J. Kramer, head of John J. Kramer & Associates, Dearborn, Mich., recently by John Balch, executive vice president.

According to Chester S. Stackpole, general sales manager of the Heating & Cooling Div., Kramer showed the greatest increase in 1954 over sales goals established by the company.

You Can't Afford To Gamble...

When your reputation as an expert on refrigeration and air conditioning is at stake, it will pay you to deal with a manufacturer with a record of dependability.

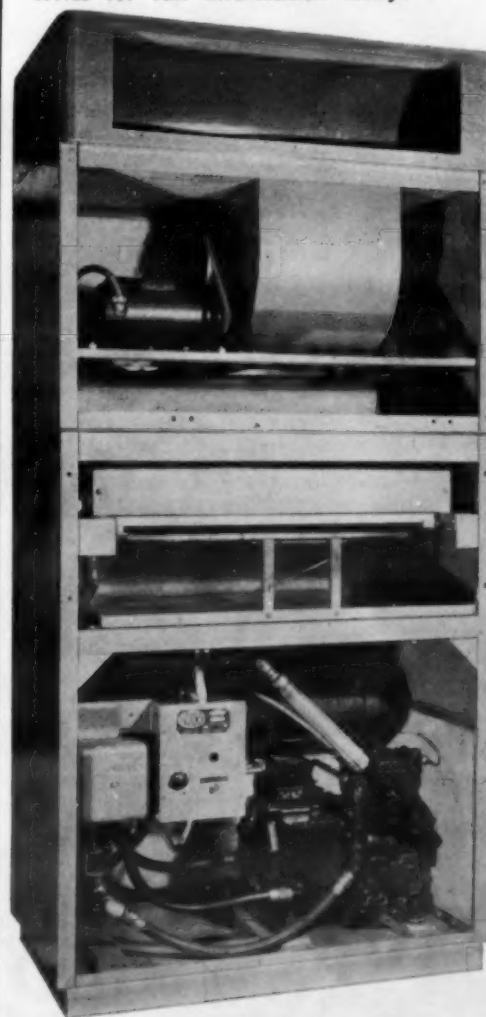
In the long run it is the Dealer or Distributor with a good list of successful installations to his credit who gets the business—regardless of price considerations.

We at Frick Company feel it is our responsibility to furnish to the industry the finest line of refrigeration and air conditioning components which can be built. We have successfully pursued this policy for 72 years.

You can be confident that when you specify or install a Frick Unit Air Conditioner you will have a satisfied customer—willing to recommend you to his friends, and a good prospect for repeat business. Write for full information today.

Features of Frick Unit Air Conditioners

- Sides of 16-gauge Steel, Double-flanged at Edges. Removable Panels Permit Use of Air Ducts.
- Interior of Cabinet Lined with 1/2" Sound and Heat Insulation, Fire Resistant and Cemented Fast.
- Fan Motor Has Vari-Speed Pulley, Easily Adjusted to Change Flow of Air.
- Four Rows of Finned Cooling Coils, with Air Precooling Coil Below, Which Serves Also as a Suction Superheater.
- Thermal Expansion Valve, with Individual Feeds to Coil Circuits.
- Air Filter, Easily Cleaned and Replaced, Is Washed by Water Falling from Coils.
- Adjustable Thermostat Controls Operation of Refrigerating System.
- All Electric Controls Mounted on Panel, behind Access Door.
- Condenser-Receiver, of Ample Size, Is Insulated; Cooling Water Carries Heat Away.
- Accessible Hermetic-type Refrigerating Machine, Mounted on Springs, Has Two or Three Balanced Cylinders Can Be Serviced in the Field.
- Strainer in Liquid Freon-12 Line. (Below Pan).
- Automatic Valve Regulates Cooling Water as Needed.



Frick Unit Air Conditioners Are Available in 3, 5 and 7 1/2 Horsepower Sizes. 3-Hp. Size Illustrated.

DEPENDABLE REFRIGERATION SINCE 1882

Frick Co.

WAYNESBORO, PENNA. U.S.A.

Some territories open for qualified dealers.

Swift Charged with Unfair Practices--

(Concluded from Page 1, Col. 5)
a packer within the meaning of the act and subject to the provisions of the act.

"II. Respondent is engaged in the business, among others, of producing, purchasing, processing, manufacturing, selling, and distributing dairy and related food products among which are ice cream sherbets, and other similar frozen foods hereinafter collectively referred to as frozen products.

"III. Respondent sells its frozen products principally at wholesale to retailers and other handlers of frozen products, such as drug, grocery, and confectionery stores, restaurants, hotels, wayside stands, and institutions.

"IV. Because of the nature of frozen products, it is necessary for such retailers and other handlers to have a cabinet or refrigeration unit of some sort designed and manufactured for use in connection with the storage, display, and sale of such products to the purchasing public, such equipment being hereinafter referred to as facilities.

DEALERS GENERALLY HANDLE ONLY ONE LINE

"V. Generally, retailers and other handlers of frozen products handle, store, and sell only one manufacturer's line of such products in their places of business. Most retailers and other handlers have limited floor space for such facilities in their places of business. For these reasons, the placement by a frozen products manufacturer of such facilities on the premises of such a retailer or other handler with or without an agreement, condition, or understanding that only the frozen products of said manufacturer shall be stored therein or sold therefrom, is in effect the same as an exclusive requirements dealing arrangement or contract. . . .

"VIII. Respondent in the course and conduct of its frozen products business is, and has been for a substantial period of time in the past, in competition with firms . . . engaged in the frozen products and frozen products facilities businesses in commerce. . . .

"X. Respondent, in carrying on its frozen products business in commerce, has engaged in and used for a period of more than two years immediately preceding the issuance of this complaint and notice of hearing, and is now engaging in and using, various practices and devices, including those specified below, for the purpose or with the effect of:

"(1) inducing a substantial number of established retailers and other handlers of frozen products to discontinue handling, storing, and selling the frozen products of its competitors, to handle, store, and sell respondent's frozen products in lieu thereof, and to continue so handling, storing, and

selling respondent's frozen products; and

"(2) inducing a substantial number of new retailers and other handlers of frozen products to handle, store, and sell respondent's frozen products exclusively and to continue so handling, storing, and selling respondent's frozen products."

'PRACTICES, DEVICES' SPECIFIED

These are the "practices and devices" specified, shorn of much of the repetitive legal language:

Offering to make and making facilities available to such retailers and other handlers on the condition, agreement, or understanding, express or implied, that such retailers and other handlers shall handle, store, and sell the frozen products of respondent exclusively; and making them available at less than the cost to respondent of making said facilities available.

Offering to make and making loans of money to such retailers and other handlers for the purchase of facilities or for the purpose of supplying funds to such retailers and other handlers to meet general operating expenses on the condition, agreement, or understanding, express or implied, that the recipients of such loans shall handle, store, and sell the frozen products exclusively; and doing so at less than the cost to respondent of making said loans.

Offering to supply and supplying such retailers and other handlers with other equipment than facilities for use in the conduct of their business, e.g. soda fountain equipment and other store fixtures, on the same basis as mentioned above, and at less than the cost to respondent of supplying such equipment.

Offering to perform and performing services of value for and offering to furnish and furnishing such services to such retailers and other handlers, e.g., repainting of the interior of their establishments and servicing facilities and soda fountain equipment, on the condition of exclusively handling its products, and doing so at less than the cost to respondent of the services performed.

Offering to make and making discounts, rebates, allowances, and payments in connection with sales of frozen products to such retailers and other handlers on the basis of exclusively handling or on a volume basis whereby the discounts, etc., in connection with larger quantities are greater than the difference in the savings in cost to respondent in selling the larger quantities.

Similar offers are made to such retailers who own their own facilities while not offering to make or making such discounts, etc., to competing retailers and other handlers who do not own facilities.

ADVERSE TO THE PUBLIC INTEREST

"XI. The effect upon competition of the use of the aforesaid practices and devices by respondent is adverse to the public interest; and the capacity, tendency, and effect of said practices and devices are, and have been, unreasonably to hinder, hamper, and restrain competing manufacturers of competitive frozen products in disposing of same to retailers and other handlers and unreasonably to lessen, eliminate, restrain, hamper, and suppress competition in the

sale in commerce of frozen products and facilities and to create in respondent a monopolistic power in connection with the sale of said frozen products and facilities.

"These practices and devices contribute to monopolization of the frozen products industry in the hands of a few. The use by respondent and others of such unfair and unjustly discriminatory practices and devices is prejudicial to small business concerns with limited resources and tends to destroy the freedom of retailers and other handlers to select frozen products pursuant to customer demands or their own free will.

"XII. By reason of the foregoing facts, respondent has engaged in and used, and is engaging in and using, unfair and unjustly discriminatory practices and devices in commerce in violation of section 202 of the act (7 U.S.C. 192). . . .

"Respondent is hereby notified that a hearing for the purpose specified above will be held in Chicago, Illinois, at a place therein to be designated later, beginning on the 2nd day of May, 1955 at 10 a.m., or as soon thereafter as the parties may be heard and continuing from time to time until such hearing is completed. At such hearing the respondent will have the right to appear and show cause why an appropriate order should not be issued . . . requiring it to cease and desist from violating the act with respect to the matters alleged herein."

WASHINGTON, D. C.—Several Air Conditioning projects were listed in the daily *Synopsis of U. S. Government Proposed Procurement, Sales and Contract Awards*, which arrived too late for inclusion in the regular weekly listing to be found on page 27. Those included in this group are all requests for bids. For further listing refer to page 27.

Description	Quantity	Invitation No.	Opening Date
Headquarters, Third Army, Office of the Custodian, Third Army Welfare Funds, Special Services Section, Fort McPherson, Ga. Air Conditioning Post Chapel, Building T-734, Atlanta General Depot, Georgia.	Job	(QM-09-090-55-54)	15 Mar 55
Air Conditioning Main Post Chapel, Building 499, Fort Bragg, N. C.	Job	(ENG-31-001-55-104)	15 Mar 55
Air Conditioning Library and Chapel, Buildings T-1277 and T-2607, Fort Campbell, Kentucky.	Job	SS-55-2	15 Mar 55
Air Conditioning Chapel Nr. 8, Building T-1916, Camp Gordon, Georgia.	Job	69	15 Mar 55
Air Conditioning of Chapel Nr. 9, Building 5515, and Library, Building 5348, Fort Jackson, S. C.	Job	(FJPC-SS-38-042-55-2)	15 Mar 55
Air Conditioning of Silver Chapel, Building 67, Fort McClellan, Ala.	Job	SS-5-54	15 Mar 55
Air Conditioning of Service Club, Building 302, and Chapel, Building 109, Camp Rucker, Alabama.	Job	(01-044-55-77)	15 Mar 55
Air Conditioning Post Chapel, Building T-151, Redstone Arsenal, Huntsville, Alabama.	Job	(ORD-01-021-55-412)	15 Mar 55
Air Conditioning Old Service Club, Building T-161, Redstone Arsenal, Huntsville, Alabama.	Job	(ORD-01-021-55-413)	15 Mar 55
Air Conditioning Post Chapel Nr. 1, Building 381, Camp Stewart, Georgia.	Job	(09-076-55-18)	15 Mar 55
Since the foregoing listed invitations for bids are part of the Third Army Welfare Fund Program for air conditioning and improvement of chapels, service clubs and libraries, consideration will be given to bids covering one or more of the projects. For example, bids will be considered for from one up to and including ten projects. The right is reserved to accept the combination of bids resulting in the lowest over-all cost.			
Office of the Contracting Officer, 1360th Air Base Group, Air Photographic and Charting Service (MATS) United States Air Force, Orlando Air Force Base, Florida	Job	08-614-55-32-B	8 Mar 55
Services and material to install year-round air conditioning system in Bldg. T-2024, Headquarters Area, Orlando Air Force Base, Orlando, Fla.			



UNARCO

ROYAL-AIRE a distinctive conditioner featuring UNARCO "pump-down" control system

It is doubtful that any air conditioner can match the efficiency and beauty of the UNARCO ROYAL-AIRE. This all-new conditioner provides "just right" cooling comfort, adding distinction to any setting.

Oversize cooling coils . . . accessible, hermetic motor-compressor units . . . and the exclusive UNARCO "pump-down" control system, which prevents compressor damage . . . are but a few outstanding features of the ROYAL-AIRE line.

Available in five capacities (3 to 15-ton) the ROYAL-AIRE is balance-engineered! This insures

full cooling capacities and quiet operation under all conditions, producing a pleasurable climate and atmosphere for any size room.

The ROYAL-AIRE is eminently suited to comfort-cool dining rooms, taverns, drug stores, clothing stores, and offices . . . to cool wherever the ultimate in efficiency and long life is desired. Address Heating & Cooling Division for descriptive literature.

Union Asbestos & Rubber Company
332 So. Michigan Ave., Chicago 4, Ill.
Canadian Representative: Albera Universal Ltd., Toronto

UNARCO

the finest in heating and cooling products at no extra cost

Redmond
MICROMOTORS
One of largest stocks
in the world!

FACTORY DISTRIBUTORS
MARVIN L. "FERGIE" FERGESTAD
CYCLO-FREEZE CORP.
6318 Cambridge, Mpls. 16, Minn.
West 9-6794

RESIDENTIAL AIR CONDITIONING AND HEATING SALES ENGINEER

National Manufacturer of complete line of residential Air Conditioning and Warm Air Heating Equipment requires experienced sales engineer for each of the following areas: Mid-West, South-West, and Pacific Coast.

Must be capable of assuming responsibilities of regional sales manager. Duties consist of servicing and expanding our well-established National Distribution System.

Send Complete resume of experience and photo with first letter. Our employees know of this advertisement. BOX A5169, Air Conditioning & Refrigeration News.